

BUSINESS HORIZONS

SPRING 1959

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OWNERSHIP IS WIDESPREAD. A.T.&T. share owners live in cities, towns and on farms, in 22,000 communities throughout the country. About 450,000 of the shares are in two names, generally husband and wife. Many hundreds of hospitals, churches, libraries and charitable organizations are among the holders of A.T.&T. stock and bonds.

would not have the quality and quantity of telephone service you enjoy today. Nor would there be work and wages for 735,000 employees.

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Articles in Brief

FARM SURPLUSES: HOW TO END THEM

JOHN H. MACMILLAN, JR.

THE ANSWER to America's farm surplus problem lies in more rather than in less production. Public spending for subsidies must be aimed at assisting the farmer, not at inflating farm prices. Lower production costs and, consequently, lower prices would create greater world markets for American farm products. Now, the farmer has no choice but to raise to the limit of capacity, knowing he will be able to "sell" his excess crops to the government.

The three main farm groups receive, in exactly opposite proportions to their need, the farm subsidies. The major commercial or big business farmers account for more than $\frac{1}{2}$ of the crop-price benefits, although they constitute only slightly more than $\frac{1}{4}$ of the farmers. The marginal group represents over $\frac{1}{2}$ of our farmers, but accounts for less than $\frac{1}{10}$ of total farm sales. These farmers receive little help from acreage allotments and crop supports. The small commercial farmers, located midway between the other two groups, make up less than $\frac{1}{4}$ of the farm population and produce about $\frac{1}{4}$ of the total sales. They receive limited aid, but there is a tendency either to slide downward into the marginals or to become more mechanized and join the large commercials.

No one would be hurt by the passing of price supports. In fact, the smaller-farm areas would hold many people who otherwise would migrate to jobs in large manufacturing areas because they were unable to compete with major commercials in the farm subsidy race.

Taking the place of government subsidies could be programs such as the Rural Development Pro-

gram that would encourage self-help and aid in creation of efficient farm units. In this way, much unnecessary spending would be cut, surpluses would be used, and the farmer would be economically healthier.

DOING BUSINESS IN THE COMMON MARKET

EMILE BENOIT

INTERNATIONAL business is growing a lot more rapidly than domestic business, and growth prospects in the newly formed European Common Market are particularly bright. While some U.S. exports will be adversely affected by tariff discrimination, quantitative restrictions, and increased European competitiveness, others will grow with the Market. Moreover, production in EEC itself, through licensing or establishing subsidiaries, will often offer a more secure and more profitable method of holding European markets than exporting.

Revised estimates show that EEC markets are already over two-fifths the size of the U.S. market, and European productivity, although considerably lower than American, is rising a lot faster. Furthermore, European output per dollar of labor cost is higher, because average manufacturing wage rates, including social charges, run about \$.50 to \$.70 an hour, compared to well over \$2 in the United States.

Business taxes are generally not far below U.S. rates, with two important exceptions: Belgian taxes on retained earnings work out to only about 28 per cent; and German taxes on distributed earnings have now been reduced to the extremely low level of 15 per cent.

The transfer of dividends, the repatriation of capital, and the risks of exchange devaluations do not constitute really serious problems. The investment climate is generally favorable, especially in the Netherlands.

U.S. investment in EEC is still small in relation to existing opportunities, let alone growth prospects. In relation to GNP, it has only one-third the intensity of our investment in the United Kingdom, and only 3 per cent the intensity of our investment in Canada.

THE WEAKENING OF MANAGERIAL RIGHTS

FRANK T. DEVYVER

HISTORICALLY, management has possessed certain rights in dealing with employees. These rights have been modified in both the United States and Australia. In Australia, the labor courts decide wages, hours, and working conditions. In the United States, these matters are decided unilaterally by management or by collective bargaining with a labor union.

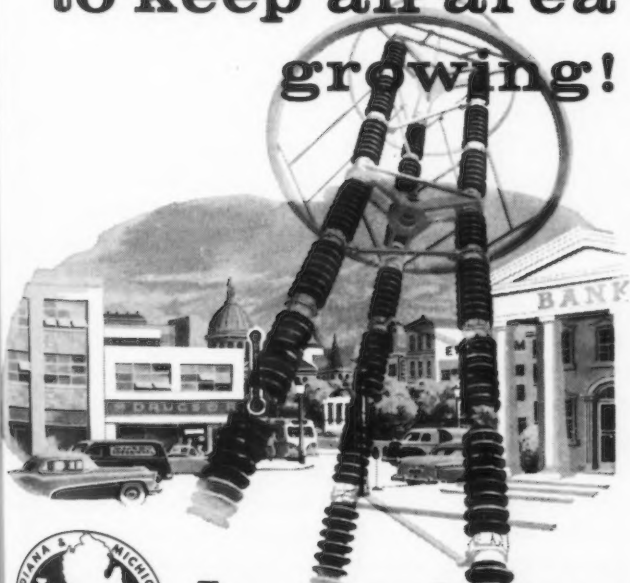
Even under the system of compulsory arbitration, Australian management has retained a final control over the work force that American management has given up under collective bargaining. By agreeing to a formal grievance procedure with arbitration as the terminal point, American management has surrendered many traditional rights to outside arbitrators.

Seniority, the *right* of workers in most organized American plants, is considered by Australian management and the labor courts in the same way that American management of unorganized plants considers it.

American management, by agreeing to the arbitration of all grievances in discipline cases, has lost control of the final decision for such cases. American arbitrators have the right to order discharged workers reinstated with back pay. Australian management cannot be ordered to re-employ discharged workers unless the worker has been fired for union activity. Sometimes Australian unions take direct action when they feel that a fellow member has been mistreated.

In the areas of transfers and merit rating, Australian management also retains the final decision, whereas American arbitrators have the authority to decide against management's judgment.

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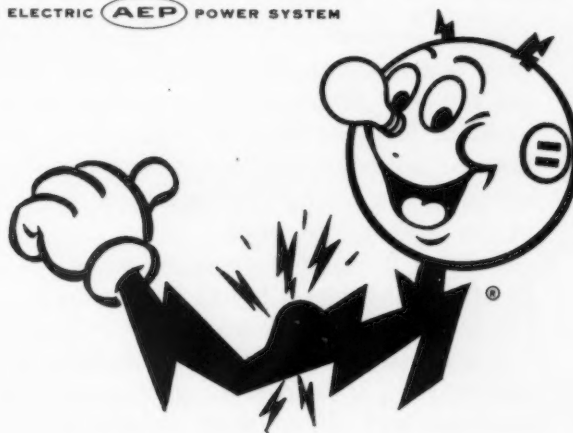


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HERMAN B. WELLS

AMERICAN education today is challenged by Russian education. In spite of considerable specialization and regimentation and in spite of gaps, the Russian educational system is indeed impressive.

The Soviet Union has built fine structures, extensive libraries, and well-equipped laboratories. About 2 to 3 per cent of Russian GNP goes to education, compared to about 1 per cent in the United States. Professors are very well paid and enjoy high social status. And perhaps most impressive of all is the tremendous *momentum* of educational progress, the fantastic achievements made over short periods of time.

To meet this challenge, we must increase both public and private financial support of education. Higher faculty salaries are a must—and along with this, the productivity of the average faculty member should be increased by such techniques as closed-circuit television. Rather than establish expensive new colleges, we should build onto the existing ones; an increase in the size of smaller colleges will make them more efficient. We should utilize the existing plant more fully instead of insisting on building more plant—quality instruction is more important than elegant physical surroundings.

This task of economizing our educational resources during the next few years will probably not be popular and certainly will not be easy. But if we are to maintain our system of higher education, indeed our very culture, such a program to meet the challenge of Soviet education must be adopted.

THE ASSISTANT: IDLE OR VITAL?

RICHARD C. ANDERSON

USE OF assistants in business organizations has been closely scrutinized in recent years, and the practice has been severely criticized in some quarters. Some of these criticisms are no doubt justified, but before business outlaws the position completely, a careful re-examination of the role of the assistant is in order.

Some of the more common criticisms are that its use (1) imposes a barrier to communication; (2) adds to administrative costs; (3) mortgages the principal's job; (4) cuts off avenues of advancement; (5) encroaches on the prerogatives of others; and (6) is totally unnecessary if the

principal will only delegate properly. However, all of these situations usually result from poor administration and not necessarily because of the existence of assistants.

True, assistants are often used to cover up poor administration, and additional problems are frequently created when multiple assistants are placed in the awkward situation of exercising authority over each other. Furthermore, the relationship between the principal and his assistant is bound to be a delicate one, requiring great tact and understanding on the part of both.

But if the principal needs assistance for execution of critical matters, assistance that other subordinates cannot assume; and if the assistant is selected with due consideration for the nature of his duties, the position can add greatly to the effectiveness of management.

TOP MANAGEMENT TAKES A SECOND LOOK AT ELECTRONIC DATA PROCESSING

HAROLD KOONTZ

TOP management cannot ignore the possibilities of electronic data processing machines, nor can it overlook certain responsibilities for their successful use. Some of these problems are properly the responsibility of top management and cannot be left to the EDP experts.

The advantages of EDP are many—its amazing speed and memory are only the most obvious. Unfortunately, many managements have found that EDP has its drawbacks too. Seemingly endless delays, high costs of operation, serious organizational and personnel problems, and disappointing savings have all been the results of EDP.

Top management must make decisions on a number of things other than the capital and operating expenses necessary to install EDP. These are not decisions involving expert knowledge of the machine or programming techniques. Should the company develop an integrated system of EDP or approach it on a step-by-step basis? Is top management ready to back detailed procedures study and overhaul? Has a feasibility study been made, weighing the disadvantages of EDP as well as the advantages? Have studies been made to see how the machine can contribute to operations research solution of major planning problems? Have solutions for the personnel and organizational problems and impacts of EDP been determined?

For those managers who solve these problems and who realize that EDP is not a cure-all, it can become a tool with great potential for improving the quality of management.

Which American industry now betters the living of 2 out of every 3 families?

...HERE ARE SOME SURPRISING FACTS ABOUT THE TRADING STAMP INDUSTRY

SO FAR, whenever our nation's economy has needed expansion, a new industry has sprung up to help the country go ahead. The automobile industry, employing millions, was followed closely by the development of radio and radio broadcasting to make more millions of jobs. Then came the airplane industry, air conditioning, plastics, television, frozen foods, to change our lives some more.

The trading stamp industry, while not new, belongs to this expansion group and has been one of the fastest growing of all. Today it betters the living of more than 2 out of every 3 families—the 35 million American families who save trading stamps.

Obviously, an industry affecting such a large proportion of our population must bring far-reaching benefits for the nation's economy. And it does. In 1957 the trading stamp industry bought 250 million dollars' worth of products from America's manufacturers. In one way or another, it provided employment for

90,000 people in many different industries.

Its economic side benefits, too, are many. In 1957 the trading stamp industry was a 20 million dollar customer of transportation companies, bought 7 million dollars' worth of advertising and paid 55 million dollars in state and federal taxes.

The people in this industry, its merchandise and redemption stores, its warehouses and transportation and all the activity that goes on within it are integrated economically *everywhere* in state after state.

Thus it seems plain that the trading stamp industry along with the 35 million families it serves has become, like other expansion industries, a living, vital segment of our economy.

★ ★ ★

NOTE: If you would like to receive additional information about the trading stamp industry, or answers to specific questions about stamps, simply write to The Sperry and Hutchinson Company, Dept. 5DD, 114 Fifth Avenue, New York 11, New York.



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A MARKETING ANALYSIS OF RELIGION

JAMES W. CULLITON

THERE has been, in recent years, a growing interest among businessmen in the relationships between business and religion. Despite intended objectivity, this interest has not been well-balanced; it might be summed up in the question, "What can religion do for business?" This smacks of self-righteousness on the part of proponents of religion and of unbecoming humility on the part of the businessman. To contribute to mutual understanding, we might move to the opposite position and ask, "What can business do for religion?"

A business approach to religion would be very revealing; the types of analysis that businessmen make are basically sound and are applicable to religion.

A marketing audit, for example, of the product—religion—would reveal several facts. The product is eternal happiness, but the prices among the various brands differ widely. It appears that the potential customer has not been persuaded that what seems to be a high price is really not high in the light of benefits received, or has not realized the value of the product relative to a rather low price.

There are several weaknesses in the promotional techniques used. A major part of the effort is centered upon those who are already customers; missionary work is often done without adequate understanding of the potential customers' wants and motivations. A large part of the promotional material used is designed for a customer no longer predominant. And there may also be too much secondary rather than primary selling.

In using the marketing audit technique in answering questions about the marketing of religion, a good marketing man believes: "If the consumer does not act the way I want him to, that is my fault, not his."

THE BUSINESS OF SCHOOLS OF BUSINESS

W. ALLEN WALLIS

THE QUESTION that business schools should ask in planning their curricula is not "What does a successful businessman need to know?" but "Of all the things that a successful businessman must

learn, which are best taught in university schools of business?"

The successful businessman will need to know far more than can be learned in two years, and much of what he will need to know is not now known to anyone. The schools of business should therefore concentrate on preparation for effective lifelong learning from experience. The students are at the age where this kind of preparation is most appropriate, and it is here that the schools of business have the greatest comparative advantage over business itself in training businessmen.

Preparation for effective lifelong learning from experience requires a good grounding in the basic fields of knowledge underlying management—economics, quantitative methods, behavioral science, and law—and it requires that management subjects themselves be organized in terms of analytical methods and intellectual content rather than in terms of specific trades, industries, or types of business. Professional education in all fields has taken on this pattern of "preclinical" sciences and "clinical" sciences.

INDUSTRY'S INEXCUSABLE ACCIDENT TOLL

CLAYTON F. VAN PELT

THE MAGNITUDE of the industrial accident problem is appalling. The statistics of average work-day accidents are staggering. Top management must find the solution to this problem in an effective accident prevention program.

The solution, however, is an elusive one. There is no standard approach to be followed in all cases by all industrial concerns. Involved in the problem is an immense profit to the organization—both in man-hours saved and in increased production.

Plant foremen or superintendents should not "pass the buck." Everyone, from top management down to machine operator, is responsible for the success of the company's safety program.

Top management should take a good look at present safety programs and study their effectiveness. If there are nonessentials, or if there is an overabundance of unimportant details, the entire safety program should be revised.

The main problem is the safety of the individual employee. Each trainee should be tested and placed in a job commensurate with his aptitudes. He should receive adequate instruction in the safe use of tools or machinery necessary in his

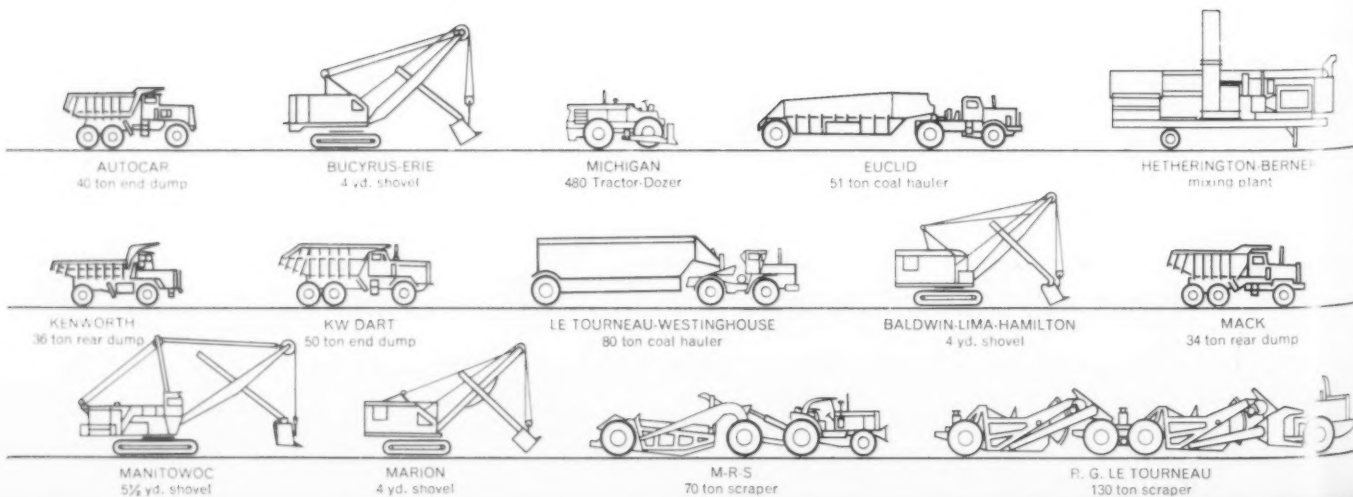


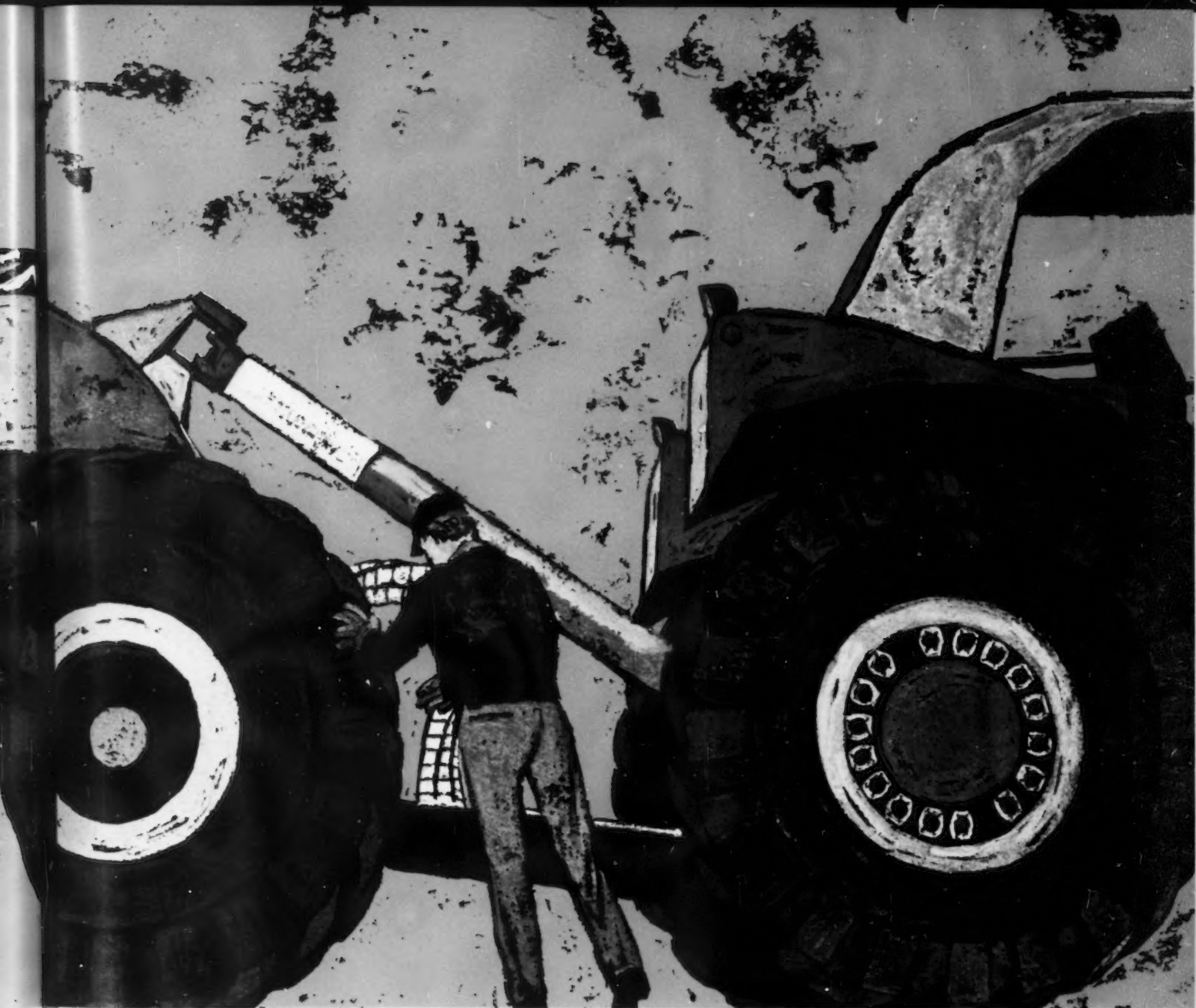
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work. A continuous check should be made to see that all precautions are being taken for the prevention of accidents, in order to insure the continuing standard of safety precautions.

In case of accident, effective emergency care is of major importance. It is up to top management to see that emergency first-aid equipment and trained technicians are available at all times.

FREE TRANSIT: A WAY OUT OF TRAFFIC JAMS

L. LESLIE WATERS

URBAN congestion is today a serious problem, and at present, conditions promise to become worse. The standard solutions of one-way streets, restricted parking, wider streets, and so forth, not only have failed to solve the problems, but have drawbacks of their own.

The best solution to congestion may be the one that sounds most drastic—to eliminate all transit fares and transport people for nothing. This would obviate a substantial portion of the budgets for super boulevards. There would be no need for super parking lots that use up valuable downtown land. And by taking private automobiles off the streets, traffic congestion would be immeasurably reduced.

Automobiles are extremely inefficient carriers of people—mass transit facilities could handle up to forty times as many people. Because of offsetting economies, operating costs of mass movement would not rise proportionately with the increase in travel.

There are, as is to be expected, some obstacles to the plan. In the first place, it could never be adopted on a limited, experimental basis. Second, there would undoubtedly be administrative and organizational problems. Third, people obviously like to drive, and would have to be persuaded to accept even free transportation. Finally, critics may assert that the plan represents merely another subsidy. (But because of the inherent economies of such a system, total subsidies might actually be reduced.)

All things considered, it would seem that the advantages outweigh the disadvantages. Free transit could be provided either by municipal operation or by a private company remunerated by the city (much in the same manner as garbage contracts are handled at present), and substantial savings could be made throughout every aspect of the metropolitan economy.

Comments from Our Readers

TO THE EDITORS:

You are to be congratulated for publishing the "Crisis in Human Relations" in the Fall 1958 *Business Horizons*. That man's predicament arises from our civilization's inability to distinguish between his physical capacity and his spiritual quality is self-evident. . . . Ours is a competitive economy and that competition as reflected in the "perpetual search for higher wages and more material goods" appears to be justified in the eyes of the economist by the progress our culture has made in easing its material existence. . . .

It may be, as Mr. Cooper suggests, that business and industry should take the lead in an attempt to restore man to the level of physical and spiritual balance he enjoyed in simpler times. . . . There are many leaders in the business field who are concerned at the "Crisis in Human Relations," but their need is for means of implementing the restoration for which man is seeking.

Neal Hennessy

*Vice-President, The Central Pharmacal Company
Seymour, Indiana*

TO THE EDITORS:

We in management should voice a fervent "Amen" to Mr. Cooper's discussion of man in today's society. If we have long been perturbed by the effects of "de-skilling" of operations upon personal job satisfaction, we have more recently been shocked by the "scientific" approach to human relations in management that attempts to reduce the control of human behavior to a set of rules and techniques. . . .

It is surprising that, as a Christian clergyman, he failed to mention Christianity as having the answers to the dilemma in which he finds man today. Instead, he sees a ray of hope in the "widening interest in existentialism." . . . Let us not discard Christianity simply because we have failed to apply its principles. . . .

H. J. Stack

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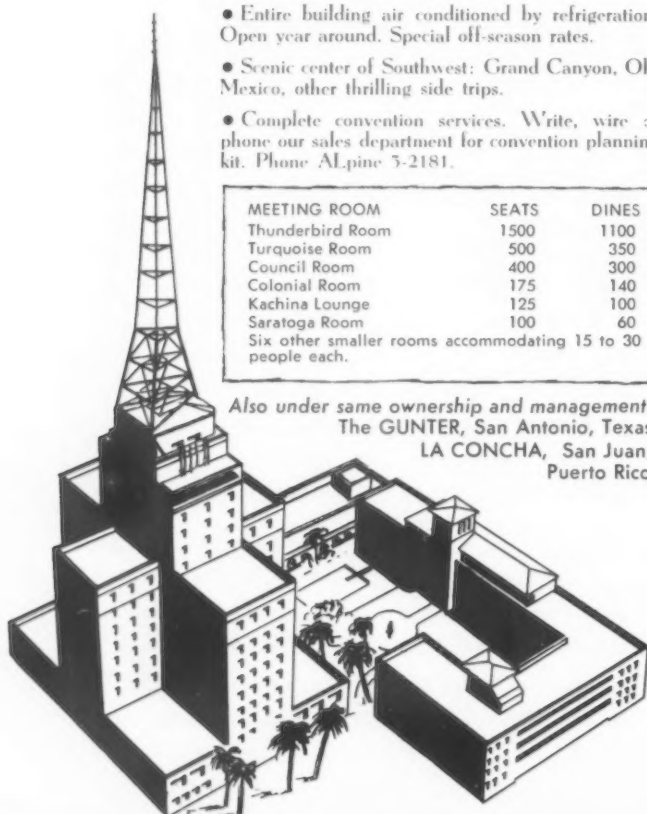
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Behind the Lines



Schuyler F. Otteson

WITH this Spring issue, *Business Horizons* begins both Volume II and its second complete year of publication. There will be four issues in Volume II when it is complete—Spring, Summer, Fall, and Winter. For those who are interested in keeping their libraries straight, Vol. I contained five issues, the four that were published in 1958 and the very first *Horizons* of all, which came out in the late fall of 1957.

All future volumes of *Horizons* will contain four issues, all published within the same year.

Contributors to this issue include a longtime member of the grain trade, a college president, businessmen, and educators who combine their faculty roles with actual work in the field of business.

A solution to the farm surplus problem is offered by a leading member of the grain trade, **John H. MacMillan, Jr.** Mr. MacMillan has been associated with Cargill, Incorporated, since 1926. Now Chairman of the Board, he served previously as Vice-President and General Manager. Mr. MacMillan is a graduate of Yale University.

Educators tend to combine their academic roles with the practice of their specialties. Such an educator is **Harold Koontz**, who re-examines the potential of electronic data processing. Mr. Koontz, who holds a Ph.D. degree from Yale University, dates his teaching career from 1933 and his business experience from 1936. Mr. Koontz is now Area Chairman and

Professor of Business Policy and Transportation, Graduate School of Business Administration, University of California, Los Angeles. He is also chairman of the board for two corporations and a consultant to various other companies. Mr. Koontz has served the government with the Office of Price Administration and the War Production Board.

American investment opportunities in Europe's Common Market have recently become a topic of particular study for **Emile Benoit**, Associate Professor of International Business at the Graduate School of Business, Columbia University. Mr. Benoit, who received his degrees from Harvard, has taught at Harvard, the University of Illinois, and Wells College.

In Washington, he held the posts of imports analyst in the War Production Board and Senior Economist in the Department of Labor. From 1948 to 1953, he was attaché in the United States embassies in London and Vienna.

He is also an associate in Charles Henry Lee and Associates, International Management Consultants, New York City.

Frank T. deVyver, who has studied the effects on managerial rights of compulsory arbitration in Australia, has been a member of the faculty at Duke University since 1935. He is currently Chairman of the Department of Economics and Business Administration.

In 1956-1957, Mr. deVyver was a Fulbright lecturer at the University of Sydney Law School in Australia. He is a former member of the Federal Advisory Committee, Bureau of Employment Security, Department of Labor, and before joining the Duke

faculty was a vice-president of Erwin Mills, Inc., in Durham, N.C., and a supervisor of the North Carolina merit system. Mr. deVyver holds a Ph.D. degree from Princeton.

The eleventh president of Indiana University, **Herman B Wells**, writes of the formidable challenge to American education and of how we can best invest the college dollar. Dr. Wells points out some contrasts between the American and Russian educational systems; in the summer of 1958, he visited Soviet Russia as a member of a delegation of seven university presidents to survey Russian higher education.

Dr. Wells is chairman of the board of trustees of the Carnegie Foundation for the Advancement of Teaching, member of the education committee of the U.S. Foreign Operation, first president of the National Education Association's department of higher education, president and member of various committees of the National Association of State Universities, and chairman of the Educational Policies Commission of the National Education Association.

Although his first interest has been educational administration, Dr. Wells has served the government in its foreign affairs. He was appointed in 1957 as a delegate to the United Nations. Twice, he has gone abroad as a representative of the United Nations, once as a member of the Allied Mission for Observation of the Greek Elections, and later as the first advisor on cultural affairs to the military governor of the U.S. occupied zone of Germany.

Richard C. Anderson's article in this issue is the companion piece to his "Today's Thinking on

Tomorrow's Managing," which appeared in the last issue of *Business Horizons*. This time, he explores the use of the assistant in business organization.

Mr. Anderson, an Organization Counselor in the United States Steel Corporation, was Executive Secretary of the California State "Little Hoover Commission."

Another educator writing in the Spring issue of *Business Horizons* is **James W. Culliton**, Dean of the College of Commerce, University of Notre Dame. Formerly on the faculties at Harvard and Boston College, he has long had an interest in business and religion, the subject of his article. In 1957, he was a participant in the Danforth Seminar on business and religion.

Mr. Culliton holds a D.C.S. degree from Harvard.

As president of a manufacturing firm and director of an insurance company specializing in workman's compensation, **Clayton F. Van Pelt** is much concerned with the prevention of industrial accidents. Mr. Van Pelt is President of the Fred Rueping Leather Co., and a director of Employers Mutuals of Wausau, Wisconsin. Mr. Van Pelt formerly had a private law practice in Fond du Lac and was judge of the 18th Circuit Court from 1929 to 1943.

He is also a director of the Wisconsin Power & Light Company, a trustee of Ripon College, and a director of the Athletic Board of the University of Wisconsin.

The Dean of the Graduate School of Business, University of Chicago, writes in this issue on education for business. **W. Allen Wallis** has served in education, government, and business. He is a former faculty member of Stanford and Yale Universities and

headed a war research program at Columbia University. Mr. Wallis has been an associate economist, National Resources Board; a Carnegie research associate with the National Bureau of Economic Research; and director of a Ford Foundation survey of the behavioral sciences.

Mr. Wallis, co-author of several books and writer of various articles in the fields of economics and statistics, is editor of the *Journal of the American Statistical Association*.

L. Leslie Waters, our "Consultation" editor, made an additional contribution to this issue with an article about our traffic congestion problem.

Mr. Waters, Professor of Transportation and Business History at Indiana University, holds a Ph.D. degree from the University of Illinois. He is serving currently on

the Executive Committee, Transportation Council, Department of Commerce.

Herbert Bandes, a staff member of Arthur D. Little, Inc., industrial researchers, is the author of this month's "Technological Horizons." A member of the American Chemical Society, Electrochemical Society, Institute of Radio Engineers, and the Research Society of America, Mr. Bandes is presently chairman of the Electronics Division of the Electrochemical Society. He received his Ph.D. degree in Chemistry from the University of Michigan. Mr. Bandes has published various technical papers in electrochemistry and other areas of chemical engineering.

In this month's "Book Notes," R. Stansbury Stockton discusses the various approaches in the new writing about management.

Presently Associate Professor of Management at Indiana University, Mr. Stockton was a faculty member and research associate at Ohio State University and a member of the visiting faculty of the School of Logistics, Air Force Institute of Technology. He has served as consultant in the fields of organization, wage and salary administration, and production control.

Mr. Stockton received his Ph. D. degree from Ohio State University.

"Consultation" in this issue has for its subject the St. Lawrence Seaway, opening officially this spring. Editor of the discussion is L. Leslie Waters, Professor of Transportation and Business History, School of Business, Indiana University.

Other participants in the exchange of views concerning the operation and future of the Seaway are:

Harry C. Brockel, Municipal Port Director, City of Milwaukee

Rowland Burnstan, Sr., President, Borg-Warner International

Joseph R. Hartley, Assistant Professor of Transportation, Indiana University, and author of *Effects of the St. Lawrence Seaway on Grain Movements*

John L. Hazard, Professor of Transportation, Michigan State University, East Lansing, Michigan; economic consultant to the St. Lawrence Seaway Corporation; author of forthcoming book entitled, *Seaway — The Emergence of a Mid-Continent*

Gerald A. Newman, Consul General of Canada, Chicago, Illinois

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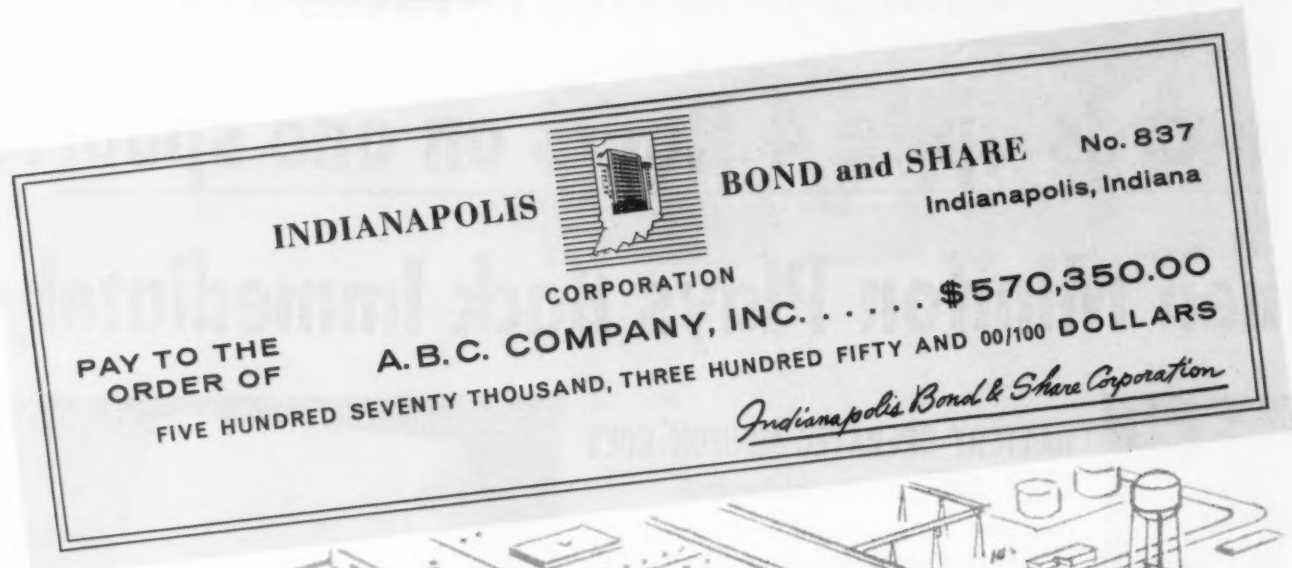
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Farm Surpluses *how to end them*

JOHN H. MACMILLAN, JR.

THE ULTIMATE SOLUTION to America's agricultural surplus problem lies not in less production, but in more.

Along with increased production must come market prices that reflect today's, and subsequently tomorrow's, ever lowering per-unit production costs. Lower prices, in turn, will enable U.S. production to serve an increasingly large segment of world markets and to create, where none exist today, vast and insatiable new markets. Given only realistic and competitive pricing of farm products, world consumption can and will absorb every bushel and pound we can raise, however large our harvest totals may be.

Future public spending to assist agriculture, however much it may be and whatever

form it may take, must be aimed at assisting people, not at inflating the price of inanimate bushels or pounds or bales of produce.

MODERATION ESSENTIAL

All of this can take place only in a farm economy freed of incentive level supports and subsidies, and equally freed of government production restrictions.

I must emphasize that it is supports at *incentive levels*—as most in recent years have been—that must be done away with. It would appear that supports designed solely to provide the farmer with *protection* are today a political, if not an economic, necessity. Those that provide him with a constant and highly profitable artificial market, if not eliminated, will produce only a lethargic agriculture and

Mr. MacMillan is Chairman of the Board of Cargill, Incorporated, Minneapolis.

eventual surpluses so great as to literally drown us in our own plenty, and will tax to a standstill our progress in other fields. Farmers today have no alternative but to produce to their utmost, with the certain knowledge that they will "sell" their crops to the government to be added to surplus stockpiles and paid for by ever gullible taxpayers.

Also, for political reasons it would appear that high supports, however destructive, must not be lowered precipitously but must decline much as the present Administration is causing them to decline, thus enabling producing farmers to adapt in an evolutionary and painless manner. At the same time, and for reasons I will outline shortly, means must be found to assist rural residents who are almost entirely nonproductive as farmers but who are in acute need of improved economic conditions, and who have been almost entirely bypassed by conventional farm legislation.

The feasibility of changing from a supported to a competitive agriculture is shown by the fact that our basic farm crops (corn, wheat, cotton, peanuts, rice, and tobacco) are the crops resulting in our largest surpluses and accounting for most of our price support payments; yet they total only one-fourth of agriculture's total output. Other less fully supported crops (eggs, flaxseed, wool, milk, and the feed grains) account for an additional one-fourth. The remaining *one-half* of farm marketings, among them such major items as meats, vegetables, and fruits, are raised entirely without subsidy and successfully sold in the competitive free market.

THE FARMER STEREOTYPE

The change from supported to nonsupported agriculture *will* take place. Its coming, I believe, is conditioned only by the speed with which we, as voters and taxpayers, look beyond our stereotype of the average farmer to recognize that the actual range of economic and social difference in agriculture is as great as in any other segment of society. It will then become obvious that the present system is not

performing its intended function, but is simply making prosperous farmers more prosperous and assuring that poor farmers will remain forever poor.

Let me strike one blow at the stereotype by differentiating here among three main groups comprising our farm population of 20 million.

Major Commercial Farmers

Of greatest economic and political power are what I will call the major commercial farmers, by every standard prosperous and successful agri-businessmen. Although they constitute only 27 per cent of the total farm numbers, they account for 78.7 per cent of all product sales. This "big farmer" group receives *at least* 78.7 per cent of crop-price benefits, for only marketable commodities are eligible for government supports. They also receive, because of the size of their farming operations, the lion's share of tax money paid for compliance with acreage allotments and soil bank or soil conservation programs.

The U.S. Bureau of the Census reports for 1954 show annual sales per farm (a figure that does not include production control payments) as from \$5,000 to \$10,000 for 55 per cent of the major commercials, from \$10,000 to \$25,000 for 35 per cent, and \$25,000 or above for 10 per cent. The census does not report peak incomes of this last group, but farm authorities agree they are in the multimillion dollar bracket.

The major commercials, operating some 1,300,000 farms, are our nation's most efficient producers. Their operations are highly mechanized; their investment in equipment and land is of big business dimensions; their output of grains and other products supplies virtually all of our domestic consumer requirements and export demand and accounts for all but the smallest fraction of our surplus stockpile. It is this group—making use of such intensive farming practices as high productivity hybrid seed, newly developed fertilizers, and the most modern planting and harvesting equipment—that in 1958 harvested the great bulk of our record 8.5 billion bushel grain

crop. It is expected to bring in a still larger harvest this year despite costly but unsuccessful efforts by the government to curb production and reduce surplus carry-over.

Large Marginal Group

A second major farm category is made up of those described by the census as "rural residents and small or part-time farmers." Most of these people are conspicuously unsuccessful as producers and, according to census figures and government social surveys, are assuredly in need of higher standards of living and broadened economic opportunities, however these ends may be achieved. These people, more than half of whom are called economically marginal by rural sociologists, represent 56 per cent of our farm population, yet account for only 7.1 per cent of total farm sales.

This trifling production, the marketed output of 1,226,000 farms, can at best bring the farmers concerned 7.1 per cent of our annual outlay for crop-price supports, and in fact brings them considerably less. For when market prices fall below support levels and larger farmers flock to the comfortable shelter of the "loan," many marginal operators find their harvests so small and diverse, the proposed addition to their incomes so paltry, and the red tape—applying for the various loans, obtaining government approved storage, and so forth—so great that they prefer to "let it go" and take their chances in the free market. The average annual sales of this group, again according to the census, ranges from a peak of \$2,500 downward literally to zero.

If the small or part-time farmers receive but little from crop supports, they receive even less from acreage allotments, soil banks, and conservation plans. Their farms are so small and their soil so poor that they cannot spare land for retirement but are obliged to farm every acre to the hilt. Even so, the technological inadequacy of their efforts results in yields one-fifth or often less than those produced by commercial farms.

It is, nonetheless, to the twin cries of "Aid

the marginal farmer," and "Save the family farm," that continued crop-price supports are demanded by certain politicians and politically powerful farm organizations. These people are the human core of our so-called farm problem, yet they are almost completely unreached by our billions of dollars of price-support expenditures.

The Small Commercial

A third important farm group, smaller than either of the others and situated economically midway between them, might be called the small commercials. These people operate some 812,000 farms, or 17 per cent of the total, and on them produce 12.1 per cent of all agricultural sales. Their incomes range from \$2,500 to \$5,000 a year, and their farming operations must be termed something less than middling in both size and efficiency. They receive, obviously, no more than 12.1 per cent of price-support payments and are able to participate in production-control plans to a limited extent. Among them appear to be two main developments, with one segment tending to become larger and more highly mechanized in order to join the major commercial group, and another tending either to dispose of its holdings to more efficient producers or to slide downward on the economic scale to the "marginal" category.

OUR GIANT SURPLUS

These groups, then, are our nation's farmers. They are the recipients, but in proportions exactly opposite to their need, of our farm subsidy dollars. Their over-all benefits (that is, the cost of our varied agricultural programs) have increased more than 50 per cent since 1955 and are still increasing. The January, 1958, estimate for fiscal 1959 farm expenditures was \$5 billion. By September, in view of 1958's bumper crops, the estimate had increased to almost \$7 billion. If the program remains as it is, ever-increasing production will assure the further rapid growth of farm-support costs.

These costs are so great that it is virtually impossible to visualize them. By the same token, it is difficult to picture the physical size of our artificially induced surplus.

This year the United States produced some 8.5 billion bushels of corn, rye, wheat, oats, barley, grain sorghums, rice, flaxseed, and soybeans. Although not all of this goes to market (roughly 70 per cent of the corn, for instance, stays on the farm to be fed to animals), an annual average of about 4 billion bushels does move to domestic and foreign purchasers.

The grain leaving the farm that is not bought in the free market by the private grain trade is taken over, through foreclosure of nonrecourse crop loans, by the government. In this way, the Commodity Credit Corporation, the governing agency, has accumulated large stores of all surplus crops and staggering amounts of corn and wheat, the two major surpluses. At present, it owns 2.2 billion bushels and will probably own nearly 2.7 billion by this time next year. In other words, it will possess two full years' domestic supply of wheat and will own stocks of corn equal to two and one-half times that which annually goes into commercial channels.

If you loaded all this grain into merchant ships at one time (figuring 380,000 bushels per 10,000 ton ship), it would take more than four-fifths of the total tonnage of the world's merchant fleets to contain it. The management of this tremendous total is so great that the Commodity Credit Corporation has had its borrowing authority steadily boosted from \$100 million in 1939 to \$14.5 billion today. As it has grown financially, it has spread out operationally until it is active in direct or indirect competition with the private grain trade in a dozen different areas. Where it does not compete, it has power to interfere through the many ground rules it can promulgate concerning how grain from its stocks must be handled.

ROLE OF GRAIN TRADE

My assertions thus far, except for an initial demand for realistic production and pricing that I shortly will substantiate, have been drawn

entirely from census data and published ccc budget-and-stock statistics. Before proceeding to the problem of surplus disposal, however, I would do well to outline my own particular vantage point, uniquely situated to encourage contact with and sympathy for the farmers themselves, the consuming and tax paying public, the Department of Agriculture and ccc, and the buyers and publics that make up our overseas markets.

My own lifelong affiliation has been with Cargill, Incorporated, a significant member of the private grain trade. Our industry is a heterogeneous group of small and large companies owning and operating thousands of small grain elevators in the countryside, and giant storage, shipping, and marketing terminals in population centers and on the seaboard. It includes, in Chicago, Minneapolis, Kansas City, Omaha, and elsewhere, large grain marketing exchanges where minute-by-minute market prices are established through cash and futures trading.

It also includes millions of dollars worth of physical handling, cleaning, drying, aerating, and other equipment; enormous transportation-management networks using trucks, river barges, ocean and lake vessels, and rail equipment to move grains from farm to market; elaborate communications systems to carry to each major company headquarters reports of sales, purchases, and any market fluctuation at grain exchanges across the U.S. and major markets throughout the world. Most important of all, staffs of highly skilled and highly competitive grain merchants are associated with each of the various companies and are intimately acquainted with every step of the progress of grain from field to table.

Contacts with Rural Areas

In the direction of the farmer, our industry provides a funnel for money—this year almost \$3.3 billion—in exchange for his grain. All this produce is moved away from the farm during the few short harvest months. Some of it goes into immediate consumption and some to storage to fill year-round domestic and export demands.

Grain firms must, for purely competitive reasons, maintain the closest possible contact with the rural community, keeping abreast of changing trends in production, levels of farm income, movements to diversify or specialize, swings from production of one crop to another, availability and acceptance of improved seeds, fertilizers, machinery, and so forth. In the same way and for the same reasons, we must establish familiarity with domestic consumers, being aware of their eating habits, the effects of price changes on these habits, research into new uses for farm products, the impact of such research on total consumption, trends in population growth, shifts from low- to high-protein foods, advances in animal feed manufacturing, food preservation techniques, and the like. Similarly, we must follow markets and market potentials in foreign countries, watching overseas production trends, trade financing possibilities, alterations in dietary preference, production—or nonproduction—of meat animals, and month-by-month harvest of various crops.

Government Contacts

We are also fortunate—or unfortunate—in having had 30 years' enforced intimacy with government farm programs and their various administering agencies. At some stages, government control of grain trade activities has been almost complete.

At present, I am pleased to say, we have more freedom to operate than we have had for many years, but we exist, even so, with CCC's 2.2 billion bushel surplus literally hanging over our heads. We are in constant fear of bureaucratic mishandlings that upset and destroy market patterns, and are under civil servant dictates—in the granting of subsidies to bring high domestic prices into line with lower world prices—whenever we negotiate sales of grain to foreign countries.

Services of the Trade

Among the trade's, and my own firm's, proudest claims are these: We perform our essential services at a profit margin smaller than any

other industry in America; we do so by virtue of the highest possible level of efficiency; we are habitual innovators, introducing newer, less expensive and better ways of handling grain, be they in the area of elevator construction, transportation management, grain preservation, or another; officials of the government itself, despite long experience in shepherding surplus stockpiles, readily admit that no one—but no one—can perform our function more efficiently than we.

THE REVOLUTION IN YIELD

The "Average" Fallacy

My colleagues and I not only know something about grain, but know something about the efficiency with which our grain supplies are produced and the necessary requirements for disposing of grain surpluses. For every bushel of grain we buy is surplus so long as it is piled in our terminal elevators or is in transit from one storage location to another, and it *remains* surplus until we find a willing buyer in some corner of the world.

The disparity between supported prices and actual production costs arises from our acceptance of average production figures and average incomes as guides to farm-support legislation. By averaging the relatively insignificant poor-land production of our marginal farm population with the bumper production of our commercials, we arrive at an average yield of 52 bushels per acre for corn, of 27 bushels per acre for wheat, and of similar small averages for the other grains. These figures are by no means representative of actual commercial production, but even they show remarkable increases in recent years.

I recently examined the records of average corn acreage and production since 1930 and alongside it looked at average records for soybeans. I found that in 28 years, corn *acreage* declined more than 25 per cent, from 101 million acres to about 73 million. However, the *production* of corn has climbed from 2 billion bushels to nearly 3.8 billion. In terms of bushels per acre, this means a rise of more than 150 per cent, from 20 to 52 bushels per

acre. In the same period, soybean production rose from 14 million bushels to 575 million, and the average yield climbed from 13 to more than 24 bushels per acre. It is worth noting that the combined crops—corn producing almost twice the bushels of 1930 and soybeans 41 times the bushels—are now grown on fewer acres than formerly had been occupied by corn alone.

If these figures are impressive, the returns of our top commercial producers are even more so. For while corn yields average 52 bushels per acre, these producers are making 100 bushels commonplace, and many are turning in 120 to 150 bushel yields. We are even aware of commercial sized production at 200 bushels per acre, with 150 considered a failure.

Similarly in wheat, where the average is 27 bushels per acre, commercial farmers are producing from 60 to 70 bushels in major wheat areas. Newly developed varieties on the Pacific Coast—varieties that will certainly lead to others suitable to the Midwest—will yield as high as 130 bushels per acre.

"Meat Efficiency" Follows

This single trend, the enormous increase in productivity of grains, constitutes a revolution. But the revolution has not ended there. If every acre will produce from two to three times as many bushels, every bushel will produce twice the amount of meat or milk, or twice the number of eggs. This has come about through more effective feeding of farm grains and increased use of manufactured feed formulas made mainly from grains.

In 1930, 15 pounds of feed and 15 weeks of feeding were required to produce a 3-pound broiler. Today, 7 pounds will raise the same bird in less than 9 weeks under farm conditions, and 5.5 pounds will do the job in less than 8 weeks on the research farm. In the 1930's, 50 pounds of feed were required to produce 77 eggs. Today, the same amount of feed will yield 145 eggs, and tomorrow we expect to average 160 eggs from 50 pounds of feed. The conversion ratio for turkeys has increased from 6.5 pounds of feed per pound of bird to 4

pounds of feed per pound, and the time needed to grow a 20-pound turkey has fallen from 34 to 23 weeks. The same story can be told in the production of milk, beef, pork, lamb—every product of today's feed formulas and feed techniques.

Worker Activity Improved

At the same time, average productivity of farm workers, which lumps together the highly productive and wholly unproductive to produce one of the most understated averages of all, has grown more since 1940 than it had grown in the previous 120 years. In 1820, an average farm worker produced enough to serve the needs of 4.1 persons; by 1940 this figure had risen to 10.8 persons, and it had climbed to 20.8 persons by 1956. If the *average* worker is serving 20.8 people, the efficient and well-equipped worker (about whom no such figures exist) is certainly serving upward of 100.

I have indicated, then, that the bulk of our farm production is not in the hands of the average farmer but in those of the major commercials. And I have also indicated that commercial production is far more efficient and involves far lower per-unit costs than average figures would indicate. At the present level of corn supports, it is reasonable to estimate that many major commercials are operating at a profit margin well in excess of 100 per cent. Wheat, which is supported at roughly \$1.90 per bushel, is being raised in the great southwestern farm areas for as little as \$.60 a bushel, or less than one-third of the support price. These production costs, low today, will be still lower tomorrow, for technological advances are proceeding at an unslackening rate.

EFFECT ON WORLD TRADE

Given compatibly lower prices, dramatic increases can be brought about by the grain trade in U.S. and world consumption of so-called surplus production.

At present, because our supported domestic prices are much higher than competitive

world prices, we are able to sell grain abroad only on receipt of government export subsidies to fill the gap between the price we pay for supplies and that at which we must offer them. In such a situation, CCC administrators must take care to keep us just barely competitive, for since any use of the subsidy technique constitutes, by definition, international "dumping," its use to make us very competitive would bring us under immediate economic attack by foreign governments.

If, however, our domestic and world prices were identical, and if they were only reasonably higher than actual per-unit costs of raising the products, we could compete with the utmost vigor without fear of accusation. That our prices would be competitive in this situation is beyond doubt, for today, when mechanization so largely compensates for the differences in farm-wage scales between this and foreign countries, our commercial production is by far the most efficient in the world. Thus, our farmers could not only acquire a larger share of present world markets, but could also offer products at prices that would create, as from whole cloth, great new markets.

Population Increases

The entire Orient, all of Africa, and considerable parts of Europe are in acute need of low-cost foodstuffs. It is estimated that three-fourths of the people in today's world are undernourished or hungry, and birth trends indicate that the world's total population may double in the next 40 years. One expert, Dr. Harrison Brown, Professor of Geochemistry at California Institute of Technology, stated recently in a *New York Times* news release that "science and technology cannot provide the means of supporting a [world] population that continues to grow at the rate of 18 per cent [and in particular areas 25 per cent] per decade." Certainly these people cannot be fed—or cannot be fed by U.S. production—at prohibitively high prices.

At competitive prices, however, foreign nations will buy our grains, not only to fill presently accessible needs, but also to replace

present foodstuffs with more desirable alternatives, to increase over-all consumption of grain in cereal form, and to initiate and expand meat production, which requires some three pounds of grain to yield one pound of edible product.

Dietary Changes

There has been ample proof that changes in dietary preferences could and would take place among foreign populations. In India, where rice is historically the basic food, low prices some years ago in grain sorghums caused that grain to increase in popularity and to be imported in quantity from the U.S. Then, as sorghum supplies in this country became short, Indian importers were induced to try wheat. Today the taste for wheat, which does, to be sure, reach only the smallest fraction of India's many millions, is so well entrenched that sorghum producers are unable to regain more than a fraction of their old market. In a similar way, Japan, also historically a rice consumer, is now importing considerable quantities of wheat and barley and would import infinitely more at more favorable prices. The same patterns, greatly accelerated, would take place throughout the world if our grains were priced within consumers' means.

The dietary changes I have described involve grains consumed as cereals. But many countries, especially Japan and large areas of Europe, are now in sufficiently good economic condition to undertake major production of meat products. Poultry raising, especially making use of advanced breeds and feeding techniques developed in the U.S., could become tremendously popular. If prices for our feed grains were appropriate, export demand would increase a hundredfold.

To a lesser extent in the U.S., but still very appreciably, consumption of meat and other protein products would climb if grain were more accessible. Those people whose incomes are low, and who can afford meat only occasionally, would increase their usage. Others, who now buy all the meat they can eat, would raise their standards from middle-priced cuts to those now in the so-called luxury class.

I repeat that the markets are there and waiting. Our present need is only for reduction in subsidies and a gradual lowering, to levels consistent with production costs, of free market prices.

EFFECT ON FARMERS

But what of our farmers while this takes place? Will they be hurt? Will they profit? To what degree will these changes affect them?

Again one must beware of average statistics and generalizations about the "average" farmer, a fiction that no more exists than does the "average" soldier, arrived at by compounding the Duke of Wellington with Willie and Joe.

Effects on Marginals

First of all, the marginal 56 per cent of our farmers, whose production is so painfully small, would certainly not be injured by the passing of farm supports, just as they have not been aided by their presence. One might, in a discussion of farm surpluses, choose simply to ignore them. But it would be unwise to do so, for they provide most of the argument for continued support. Their production makes up the lows from which compelling "averages" are derived, and their abandonment in some numbers of the countryside (for the most part in favor of Detroit, Chicago, and other industrial centers) lends credence to cries about the downfall of the family farm. If their situation is not improved, they will continue to be used as dupes by politicians and farm groups and will continue to be a stumbling block to the emergence of a free agriculture. If it is improved, we will have done the entire nation a service by providing additions to total income, new sources of capable manpower, and new and vigorous markets for the sale of consumer goods.

The marginal farm group is trying, as best it can, to solve its own problems. Many of its members, especially younger members, have migrated to urban centers to seek more rewarding jobs. This trend is certain to continue

and in time would bring about adjustment on a strict *laissez faire* basis. Unfortunately, however, the problem would require decades to solve; its solution is one that cannot be officially encouraged, if only because the states concerned through their congressional delegations would vigorously resist any planned loss of citizens. Even if such planning were possible, the solution is a dubious one for it smacks of government pressure and, in its most extreme aspect, of forced migration.

We must endeavor to help these people, or more properly help them to help themselves, in their own areas. Many live where they live because they want to, simply and flatly preferring a rural to an urban existence. In that respect, at least, they are the envy of many of their economically more fortunate big city brothers.

Help Via Free Enterprise. One government program has been making tentative steps for the past three years toward doing exactly what I suggest. Called the Rural Development Program, it would encourage self-help in underdeveloped areas to improve farming methods, introduce economical farm crops, encourage consolidation of small units to create larger ones, and, most important but least emphasized of all, cause town and country cooperation in setting up or attracting local industry to provide farmers with full- or part-time jobs while living at home.

Unfortunately, the program is still a pilot operation. Its budget last year amounted to only \$640,000, or 1/7,812 of the Department of Agriculture's over-all allocation. It has been organized in only 100 counties, spotted here and there among 30 states. It tends, most unfortunately, to emphasize improved farming, even when the improvement is too slight ever to result in truly commercial operations. To the program's credit, it is because it is small and because local committees, though well intended, are often ineffectual that it is forced to emphasize this kind of development.

On the industrial side, to be sure, the program has created some jobs. Most recent reports show 50 men employed in small-boat

manufacture in Indiana, 100 in garment making in North Carolina, 130 in poultry processing in Texas, 54 in charcoal manufacture in Wisconsin, and a scattering in similar industries elsewhere. But the totals are small, and the progress slow.

I believe it politically essential that this program be greatly stepped up and economically essential that its emphasis be shifted to creation of local industry, with farming encouraged only where there is promise of attaining commercial levels. First and foremost, I believe jobs should not be created by direct government expenditure, but only by encouraged—or induced—free enterprise activity.

To some extent, the attraction of industry by organized local effort will bring results and might well have solved the problem long ago had not 30 years of government programming so greatly hindered natural development of the rural economy. But if philanthropy is deemed a proper function of government—a premise that is highly debatable—and if 30 years' time lag is to be overcome in a reasonable time, then the adjustment process could be greatly accelerated by government means and probably at moderate cost.

One approach might be low-interest, long-term loans, handled by local banks and backed up by government guarantees, to cause small business and industry to locate in the countryside. Another might be tax incentives, possibly based on fast plant-depreciation write-offs, possibly on corporate income tax reductions proportionate to the numbers of people employed, to cause major industry to expand into the countryside with full-sized factories or small assembly or parts-making plants.

Such an incentive approach could include all nonurban areas or be confined to particular areas of greatest distress. It would be far less costly than a direct government-works project approach, because a dollar of tax allowance to a company could be spent *in full*, while a dollar received from taxes is more than half consumed by administrative costs before it is spent to the public's benefit. Further, the jobs produced would result in expanded personal income taxes to more than offset the cost of

the program. Still further, and of utmost importance in my opinion, the approach would not invite further direct intervention by government in our rural economy.

I have discussed at some length the need for realistic help for our marginal farmers. It is inevitable that sooner or later they will receive help of some sort, and I believe it important they be helped in a way *strengthening* to free enterprise rather than weakening. I also believe that if they are not helped, they will be used forever as an excuse for crop-price supports and even (heaven forbid) for a fully nationalized agriculture.

Effect on Small Commercial

The expansion of industry to the countryside would also be of value to the middle group of farmers, the so-called small commercials. As I have mentioned, some of these people, by trying to work undersized and undermechanized farms, are sliding downward toward the marginal group and could be greatly bolstered by the availability of nearby jobs. Many today are staying with their farms simply because there are no palatable alternatives, but they would be perfectly willing to leave farming if better-paying jobs were available. This, in turn, would make it possible for those deciding to continue as farmers to acquire needed land, to expand to full economic size, and to become effective members of the major commercial group.

In such a situation, land sales would not be evidence that farmers were being forced off the farm, but, on the contrary, would be highly profitable and desirable transactions. Farmers would not sell until more remunerative occupations were opened to them. Even then, many would continue living in their farm homes, selling only their tillable land; and the price of that land would continue as high, or higher, than today.

Power of Political Clichés

The national index of farm land values is now at an all-time peak, and Department of Agriculture statisticians predict it will be still

higher this year. On November 1, 1958, it stood at 163 per cent of the base 1947-49 average and was up 6 per cent from the same time last year. Federal forecasters say that by November, 1959, it will have increased another 6 per cent. This reflects the fact that land in the Corn Belt is now selling at \$500 an acre, with neighboring farmers and nonfarm buyers clamoring for any parcel that becomes available. This also gives us insight into the sad plight of the producing farmer and causes us to wonder that so many would-be farmers, with money jingling in their pockets, are so anxious to share in his sadness.

The indisputable fact that farm land sales *are* taking place and that the farm population *is* declining have been interpreted by some politicians and support-oriented farm groups (some major farm organizations are not support-oriented and recognize the fallacy of the argument) as meaning the decline and fall of the family farm and its replacement by a giant bogey called the corporate farm.

To be sure, farms are growing larger in a necessary movement to achieve economic size. Average census figures show farm size to have increased from 207 acres 10 years ago to roughly 260 acres today. In fact, however, efficiently sized farms vary enormously according to the crops being raised; desirable fruit and vegetable operations are possible on far less than average acreage, desirable corn production can be raised on roughly average sized farms, and desirable wheat acreage is considerably larger than the average. Thus, size does have relevance to efficiency, but it has no relevance whatever to the character of farm ownership and management.

By far the preponderance of American farms, regardless of size, are family owned and family operated. In fact, families owning efficient and mechanized farms are doing a greater share of the work themselves than ever before. Except for seasonal peak periods, by far the larger part of the physical labor on commercial farms is by the farmer himself, his sons, and sometimes his wife and daughters, with employment figures for hired men showing an appreciable drop. Meanwhile, corpo-

rate farms are a distinct rarity in this country, with a few exceptions notable in vegetable and citrus production and a very few in the production of wheat. The misguided advocacy of government supports to save the family farm, if it has any meaning at all, means, "Prevent the too-small, uneconomic family farm from growing to economic size," or "Beguile the voting farmer with promises, at whatever cost to him and to the public." The cry of, "Save the family farm," has become a demagogic cliché, shortsighted at best and cruel at worst, by some farm groups to assure continued subsidization and by some legislators to obtain favor and votes from rural constituencies. Other legislators, elected from nonfarm consumer areas, have been equally shortsighted in their willingness to go along in exchange for support on other issues.

Legislators, from both farm and nonfarm districts, would do well to look again at the oft quoted farm statistics. The fact, for example, that 30 years ago farmers accounted for 30 per cent of our total population while today they account for but 11.6 per cent, does not mean the end of the family farm; it does mean that more and more voters are farm *consumers* rather than farm *producers*. If these people are to be served, if their interests are to be weighed against the costly failure of farm supports, it will certainly mean an end to the high support alliance in Congress.

It will also mean an end to an era in which the general public has been made to pay through the nose thrice over: once in paying for the supports themselves, again in storing and subsidizing the export of gigantic surpluses, and a third time in purchasing overpriced commodities for home consumption.

Effect on Major Commercials

I trust my resumé has indicated that major commercial farmers, like the marginal group and the small commercials, would be helped far more than hurt by the gradual end of price supports and a realistic lowering of free market prices. To be sure, the "same old bunch" of politicians and farm groups would cry out,

and loudly, on the assumption that a golden-egg-laying goose in the hand is worth two in the bush. This cry would not be for the loss of bona fide profits, however, but for the loss of publicly paid-for excess profits. Simultaneously, other farm groups and a large percentage of the farmers themselves would applaud the change and welcome a return to free and independent production. This assertion is amply supported by the recent corn vote, in which 71 per cent of farmers voting opposed high supports and acreage controls and supported wide-open production at a lower support level.

THE NET RESULT

This same approach, if followed throughout agriculture, would mean that efficient producers, to keep net profits high despite lower

profit margins, would utilize all of their tillable land, boost their total production, and lower their per-unit costs still further. The less efficient, who have been willing to receive smaller margins in order to ride the gravy train in comfort, would go back to work, would apply the million and one production techniques presently available, and would look avidly for the million and two still on the horizon.

Meanwhile, the consuming and taxpaying public would find itself "back-in-pocket" after 30 years' unnecessary spending; the grain merchandising industry would be unburdened of government controls and surpluses and would be able to proceed with its task of serving the farmer and feeding the world; and farmers—along with the rest of the rural community—would find themselves economically healthier than ever before in history.

EVERYTHING is extraordinary in America, the social condition of the inhabitants as well as the laws; but the soil upon which these institutions are founded is more extraordinary than all the rest. When the earth was given to men by the Creator, the earth was inexhaustible; but men were weak and ignorant, and when they had learned to take advantage of the treasures which it contained, they already covered its surface and were soon obliged to earn by the sword an asylum for repose and freedom. Just then North America was discovered, as if it had been kept in reserve by the Deity and had just risen from beneath the waters of the Deluge.

—Alexis de Tocqueville

DEMOCRACY IN AMERICA

Doing Business in the Common Market

This new economic community offers opportunities that must not be overlooked.

SOME OF THE MOST rewarding business opportunities today are in foreign operations. In 1957, our exports plus the sales of U.S. subsidiaries and licensees probably came to well over \$50 billion. (By way of comparison, sales of autos and parts in the United States were less than \$16 billion.) Some key U.S. firms now do from a third to a half of their business abroad. Included in this list are Colgate-Palmolive, Singer Sewing Machine, Sterling Drug, Gillette, Chas. Pfizer, H. J. Heinz, National Cash Register, and I.B.M. Returns are often higher on foreign than on domestic business. Colgate-Palmolive earned \$13 million from its foreign subsidiaries, compared to \$7 million from its domestic operations—even though domestic sales were larger. In 1958, in case after case, foreign subsidiaries showed a substantial increase of sales in the face of stable or declining exports and domestic sales by the U.S. parent company. From 1953 to 1957, the growth of indus-

try in the United States was only 1½ per cent a year. But in Europe, it averaged 7 per cent, including 10 per cent in Germany and France, 8 per cent in Italy, 6 per cent in the Netherlands, 4 per cent in Belgium, and 3½ per cent in the United Kingdom.

As indicated in Table 1, earnings on U.S. investment in the countries that have now joined the Common Market (EEC) averaged over 11 per cent of invested capital after deductible foreign taxes in 1957. This includes many new investments that are years short of the maximum pay-off period. The establishment of the Common Market, which has a population almost equal to that of the United States, will help maintain the momentum of economic growth. It will make possible mass production on a Continental scale, and it will increase the amount of competition, cut costs, and raise productivity.

Mr. Benoit is Associate Professor of International Business at Columbia University.

TABLE 1

Earnings on U.S. Direct Investment, 1957
(Millions of Dollars)

	Investment	Earnings*	Earnings as Percentage of Investment
Holland	\$ 213	\$ 22	10.3
Belgium	156	21	13.5
France	457	46	10.1
West Germany	496	61	12.3
Italy	233	25	10.7
EEC Total†	\$1,555	\$175	11.2
United Kingdom	\$1,899	\$326	17.2

* Dividends, interest, and undistributed profits of subsidiaries (after payment of foreign taxes). Inclusion of interest lowers average rate of return.

† Luxembourg excluded.

SOURCE: Adapted from Samuel Pizer and Frederick Cutler, "Private Foreign Investments Near \$37 Billion," *SURVEY OF CURRENT BUSINESS*, XXXVIII (September, 1958), 18-19.

However, the U.S. manufacturer seeking to benefit from this market faces two sets of questions: First, can this market be satisfactorily exploited by exporting from the United States, or will it be necessary to launch within Europe a production operation of some sort—licensing, assembling, or full-scale manufacturing?¹ Second, assuming a European operation is necessary, which country will provide the best base for operations? Simple, definitive answers are obviously not possible, but within the limits of available space, a few helpful comments may be made.

EXPORTING TO EEC

There has been apprehension in some quarters that the Common Market would evolve into a protectionist island cut off from the rest of the world by a high tariff wall. This fear seems baseless. The fundamental philosophy underlying the Common Market is one of liberalism and tariff reduction. Under the EEC treaty, existing tariffs of the members will simply be averaged to form a common external

tariff applying to non-EEC countries. Benelux and Germany will be raising most of their tariffs, and France and Italy will be lowering theirs. Many basic materials will have a low maximum of 3 per cent or 10 per cent under lists B and C of the treaty. It is not intended that the new average tariff will be raised, but it can be further lowered by reciprocal trade agreements. In fact, EEC has unilaterally extended to other GATT members the same 10 per cent tariff cut extended to members of EEC on December 29, 1958!

The main difficulty for American exports will not be that European tariffs will rise, but that discrimination will occur. For example, a U.S. exporter selling electric motors to France will find that the tariff of 28 per cent that he has to pay at present will drop to 26 per cent by 1962. But his German competitor will then be paying only 21 per cent. By 1972 and thereafter, the American may be paying only 16 per cent, but the German competitor will be paying no tariff at all. An exporter to Germany or Benelux will usually find rising tariffs and discrimination.

Moreover, the biggest hindrance for the American exporter will continue to be not tariffs, but quantitative and dollar exchange restrictions, the restraining effects of which will be eased but not abolished by the December, 1958, moves toward liberalization and external convertibility. The treaty aims to abolish quantitative restrictions on manufactures within EEC, but will not prevent their being maintained on dollar imports so long as a dollar shortage exists. Thus, in all likelihood, at least for the next few years, the basic limits on U.S. exports to Europe will be set not by tariffs, but by the number of dollars we send abroad by means of our own imports, foreign travel, foreign aid, foreign investment, overseas military expenditures, and so forth. On the other hand, European tariff discrimination may substantially modify the *pattern* of our exports. Some U.S. manufactured items will become noncompetitive, but this will leave Europe with more dollars to spend on other U.S. products, particularly food and raw materials.

¹ For a discussion of these alternatives in the Common Market context, see Emile Benoit, "Profit Prospects in the European Common Market," *Export Trade* (November 17, 1958), pp. 32 ff.

Even so, Europe will continue to absorb large quantities of U.S. manufactures, particularly those of our growth industries, where American research and advanced technology give us a lead and where the rise in demand will outstrip Europe's productive capacities. Examples are those U.S. products with a qualitative superiority, such as atomic reactors, electronic computers, telephone and telegraph equipment, certain photographic supplies, paper products, and many lines of machinery, plastics, pharmaceuticals, and chemicals.

A major advantage for a U.S. manufacturer seeking entry into EEC by means of exports is that this provides an inexpensive and cautious step-by-step procedure for testing out the acceptability and competitiveness of his product. On the basis of an established export trade, he can better gauge the potential advantages of a licensing, assembly, or production operation. This can prevent important mistakes and can also be of help in demonstrating to a potential licensee or partner in a joint venture the advantages of a tie-up with his firm. On the other hand, higher U.S. production costs or EEC quantitative or exchange restrictions may make an export effort unsuccessful, whereas production in Europe might succeed.

In general, then, a U.S. manufacturer interested in selling his product in Europe would be wise to contemplate setting up a European operation either immediately or fairly soon, unless his product has a unique position or outstanding qualitative superiority. Even if it is possible to hold the European market by means of exports, it may be more secure to supply the market from a local source. Besides it may be more profitable, in view of the lower European production costs.

Supplying the European market locally may be done in several different ways. One technique that is rapidly growing in popularity is that of the International Joint Business Venture, in which American capital and enterprise team up with local partners. This may often greatly reduce the capital requirements for the American investor by making it unneces-

sary to build wholly new facilities at present inflated costs. It usually provides valuable local knowledge and contacts, improved relationships with the government and local business community, and more skillful and self-assured handling of labor and public relations problems. In highly cartelized industries, it may be almost the only practicable way to gain entry.²

THE PROBLEM OF LOCATION

Once a decision has been made to establish a European production base, the next question is where. Until the recent collapse of the Free Trade Area negotiations, many U.S. firms were counting on being able to export to EEC from British bases already established or planned for the near future. Such locations would have had the additional advantage of also permitting exports to British Commonwealth countries under the protection of Empire Tariff Preferences. While a resumption of F.T.A. negotiations is not altogether unlikely, the British have not so far demonstrated a willingness to make the necessary painful concessions in such matters as Empire Preference, domestic agriculture, harmonization of monetary-fiscal policies and social charges, combined European investment funds, and so forth. Although the EEC will probably enter into special preferential arrangements with its European neighbors, it seems unwise at this juncture to count on full and free access to EEC markets except from a base within one of the six present EEC countries.

NATIONAL MARKETS

After the transitional period of 12 to 15 years, an American manufacturer located in any of

² For an introductory discussion of pros and cons of this technique, see Emile Benoit, "When Businesses Marry," *International Management Digest* (October, 1958), pp. 18-24. The Columbia University Graduate Schools of Law and Business are currently cooperating on an intensive and large-scale study of International Joint Business Ventures.

the countries within EEC should be able to sell freely to any of the others, without any barriers to trade. However, the size of the national markets retains great significance during the transitional period. It may determine whether the project can survive until the later phase is reached, and whether sufficient capital can be accumulated to expand to an optimum size when the full EEC market materializes.

The usual comparisons of European markets, expressed in dollar volume, are seriously misleading because they are based on official exchange rates, which do not reflect the true purchasing powers of the different national currencies. The estimates presented in Table 2, although subject to significant statistical limitations, do provide a more realistic basis of comparison. As Table 2 indicates, the EEC may be estimated as being over two-fifths as

large as the U.S. market. More than one-third of this market is in Germany, less than one-third in France, about one-fifth in Italy, and one-seventh in Benelux. The U.K. market, by comparison, is larger than that of Germany and about two-fifths the size of the combined EEC market.

Of interest in forecasting the market is the rate of increase in personal consumption. Measured in real terms (discounting for price increases), the average annual increase from 1953 to 1955 or 1956 was as follows: United States, 4 per cent; Germany, 10 per cent; Netherlands, 6½ per cent; France, 5½ per cent; Italy, 4 per cent; Belgium, 1½ per cent; United Kingdom, 2½ per cent. (Industrial growth rates were presented in the opening paragraph.)

COSTS

TABLE 2
Production, Consumption, and
Investment in the United States,
the United Kingdom, and EEC
in 1955

(Billions of Dollars)

	GNP	Personal Consumption	Investment— Gross Capital Formation
United States	\$390.9	\$254.0	\$60.2
West			
Germany	58.9	40.0	19.2
France	49.1	34.0	11.7
Italy	32.3	21.8	7.8
Benelux*	22.9	14.2	7.3
EEC Total	\$163.2	\$110.0	\$46.0
United Kingdom	\$ 67.4	\$ 42.1	\$14.2

* Luxembourg excluded.

SOURCE: Adapted from Milton Gilbert and Associates, COMPARATIVE NATIONAL PRODUCTS AND PRICE LEVELS (Paris: Organisation for European Economic Co-operation, 1958), p. 36, Table 7.

These estimates are valuations of gross national product, personal consumption, and gross investment (including net foreign investment), adjusted for differences in the purchasing power of the various national currencies. Two sets of estimates have been prepared, one of them price-weighted according to the U.S. pattern of production, consumption, and investment, and one price-weighted according to the patterns prevailing in the particular European country in question. Neither set in itself constitutes an entirely satisfactory basis of comparison. The figures used in our table above are a geometrical average of the two sets of estimates, which comes as close as one can now get to a single figure by which the production of U.S. and various European countries can be related in a single scale.

The main European difference in costs will be in wages. Information on comparative wage costs is fragmentary and often misleading, especially if social costs are not included. The data in Table 3 are adapted from a 1957 survey prepared for internal use by a large U.S. manufacturer with plants in several European countries. Holland and Italy have roughly equal and relatively low labor costs. France used to have the highest labor costs in EEC, but the devaluation put her labor costs between Holland and Italy on the one hand and Germany and Belgium on the other. Germany's labor costs are about one-fourth, and Belgium's about one-third, higher than those of Holland. Costs in the United Kingdom are significantly higher than in any of the EEC countries.

The spread from lowest to highest, however, looks relatively small in comparison to United States rates. Averages for all workers, inclusive of social charges, range from about \$.50 to \$.70 an hour in these different European countries, compared with a U.S. average manufacturing wage rate figure of \$2.17, not including social charges.

Obviously, wage rates tell only half the

TABLE 3
Average Wage Rates Paid by a U.S.
Manufacturer in Europe*

	Direct Wages†	Social Charges‡ (Cents per hour)	Total	Index (Holland = 100)
Holland	40	11	51	100
Belgium	51	15	66	130
France	41	17	58	114
Italy	37	18	55	108
West Germany	50	14	64	126
United Kingdom	65	7	72	141

* Original data based on April, 1957, roughly adjusted to reflect: (a) relative movements in general industrial wage rates up to the autumn of 1958, and (b) the effects of two French devaluations during August-October, 1957, and of December, 1958.

† This is an over-all average. Rates for skilled workers run 5-8c above this average, and rates for unskilled workers run 3-9c below the average.

‡ Including charges for unemployment compensation, sickness benefits, old age and invalidity pensions, family allowances and other required or customary contributions of employers not included in general tax revenues.

SOURCE: Based on a confidential report prepared for internal use by one of the largest U.S. international companies, covering wages paid for comparable jobs in its own foreign affiliates.

story. It is the relationship of wage rates to labor productivity that yields the key information on labor costs per unit of output. Therefore, recent O.E.E.C.³ estimates on increases in manufacturing output per man-hour in several European countries may be of some interest. The average annual increases, between 1954 and 1956 inclusive, work out as follows: France, 8 per cent; Belgium, 8 per cent; Germany, 5 per cent; Holland, 4 per cent; United Kingdom, 2 per cent. This compares with about 2 per cent in the United States.

These figures on productivity are extremely rough estimates; moreover, they refer merely to the rate of *increase* in productivity, not its present level, which is more relevant. On that point, over-all data are lacking. I have, however, talked with officers of a number of U.S. firms that have similar plants in two or more European countries and from them I derive the following impressions:

- (1) That in all these countries output *per dollar* of labor costs is substantially higher than in America.

³ *Europe Today and in 1960*, Vol. 1: *Europe Today* (8th Report of the O.E.E.C.; Paris: Organisation for European Economic Co-operation, 1957), p. 27, Table 6.

- (2) That output *per worker* is usually—but not invariably—substantially lower than in America.
- (3) That output per worker is usually higher in German plants than in other European plants. Furthermore, when an innovation is introduced into several plants, the pattern of response and the speed of adjustment to it come closer to the American pattern in Germany than in the other countries. The United Kingdom is sometimes mentioned as a close second in this respect.
- (4) That the workers in Germany, and also in Holland, are exceptionally conscientious.

The relatively favorable labor situation in Germany and Holland is also illustrated in the matter of labor disputes. I estimate very roughly the time lost through labor disputes per nonagricultural worker during the year 1955 as follows: Holland, 15 minutes; Germany, 20 minutes; the United Kingdom, 90 minutes; France, 105 minutes; Belgium, 150 minutes; United States, 165 minutes.

These general comparisons give little indication of what will happen in the individual case. I have heard expressions of extreme satisfaction with worker performance from American firms located in each of these countries. Moreover, past patterns and contrasts will not necessarily prevail in the future. In particular, German labor is beginning to show more aggressiveness in wage negotiations. The right of German labor to be represented on the board of the corporation may also involve some adjustments in U.S. management philosophy—though in practice this has not caused any particular trouble.

The question of labor availability, as well as cost, must also be considered. Italy is the only EEC country with a substantial and persistent labor surplus—mainly in the South—but local pools of underemployment may be found in all EEC countries. However, *skilled* labor is short everywhere in EEC.

Power and raw material costs do not vary as widely in EEC as is often supposed. Even Holland, dependent largely on imports for fuels and basic materials, is able to obtain its requirements at quite competitive prices. Italian

power and raw material costs do average somewhat higher than those of the other nations, but this is often more than offset by its relatively low labor costs. Differences in equipment costs in EEC will often be less important, since much equipment will have to be imported. However, French costs recently have been estimated by Banque Lyonnais to be 10-30 per cent higher on key items than German costs. This will have been largely offset by the December, 1958, devaluation.

TAXES

Manufacturing, excise, or turnover taxes are normally passed on to the buyer, so that their primary and direct impact is not on profits but on costs. These taxes are extremely complex and varied. Taking here only the chief taxes levied on most manufactures, the turnover tax rate on total value of manufacturer's sales is as follows: Holland, 5 per cent; Belgium, 5 per cent; Italy, 3 per cent; Germany, 4 per cent. France levies the turnover tax on value added by the manufacturer at a rate of 27½ per cent. (Thus, for example, if the manufacturer adds one-third to the value, the tax on total sales would work out to around 6.8 per cent.) Turnover taxes apparently do not in general constitute an important manufacturing cost differential between the various EEC countries, but they could be quite significant for specific products.

It is difficult to convey an accurate impression of Europe's business income tax differences in a brief summary. The following are only broad impressions and refer to maximum rates, applying to a large volume of profits, levied on profits of regular corporations such as the *Société Anonyme*, *Aktiengesellschaft*, and so forth. Provincial and local taxes are often no more burdensome than state and local taxes in the United States; they are, moreover, frequently modifiable by negotiation. Full advantage of lower foreign tax rates can be taken, of course, only if the foreign operation is organized as a foreign subsidiary rather than as a U.S. branch.

Belgium. While the nominal tax on retained profits runs up to 40 per cent on amounts over \$200,000, these taxes count as a deductible business expense, with a resulting maximum burden of around 28 per cent. This makes Belgium a fine place for a growth company planning to plow back earnings. Taxes on distributed profits range up to a maximum of about 45 per cent, with deduction permitted for amounts paid in taxes on undistributed earnings. The authorities are very liberal on deductions for interest payments (loan rather than equity financing is preferred); heavy director's fees, which may be paid to companies as well as individuals; and other compensation in lieu of dividends. There is almost no limitation on capital transfers. Foreign-owned companies are taxed at only a nominal rate on profits earned outside of Belgium. Hence Belgium may serve as a profits sanctuary base.

Holland. The rate is 47 per cent of profits over about \$13,000, whether distributed or not. A five-year deduction of 4 per cent of value of new investment may also be allowed in noninflationary periods. Holland has great, only recently discovered, potentials as a profits sanctuary. The trading profits and royalties and investment earnings of a U.S.-owned Dutch operating company that are earned outside of Holland are absolutely untaxed in Holland, and may be transferred to U.S. owners under existing tax treaties without tax. Soft currency earnings may first have to be re-invested in Holland, though, before qualifying for transfer into dollars.

Luxembourg. The rate is 49 per cent of profits over \$20,000 whether distributed or not, plus another 8-13 per cent of special taxes. A tax reform bill is being prepared.

France. The rate is 45 per cent of profits, whether distributed or not, plus 20 per cent of excess profits (profits in excess of the average of the two best years in the period 1953-1955, or in excess of 6 per cent of currently utilized capital). There is also a 19½ per cent tax on foreign transfer of dividends, mentioned below. The 1958 increase in French taxes will

raise living costs but should not hurt manufacturing profits, especially in the long run.

Germany. Recent legislation has lowered the basic tax to 15 per cent for distributed and 47 per cent for retained profits. This is now one of the best tax situations in the world for an American company expecting large dividends and planning to finance expansion by means other than retained earnings. This gives Germany a great competitive advantage in attracting U.S. investments.

Italy. The tax is 18 per cent of profits (whether distributed or not), plus 4½ per cent to 8 per cent of profits for local and provincial taxes, plus 15 per cent of excess profits (over 6 per cent of capital and reserves), plus ¼ of 1 per cent of capital and reserves. Local taxes are sometimes negotiable. With a profit rate before tax of 20 per cent, the combined tax rate might be in the neighborhood of 40 per cent. A profits tax exemption of up to 10 years is available to firms establishing productive operations in underdeveloped areas of Southern Italy.

Close attention to the peculiarities of the various national tax systems and the tax conventions between various nations can result in important tax savings. It has been estimated, for example, that a Dutch holding company in Switzerland would pay only 33½ per cent tax on undistributed profits, compared with about 45½ per cent for a U.S. or a U.K. holding company in Switzerland. Similarly, dividend payments by a U.S.-owned French company to a Swiss holding company would be spared a 19½ per cent tax that would be levied if the dividend were paid directly to the U.S. parent company.

TRANSFER AND DEVALUATION

The inexperienced foreign investor is likely to be overly discouraged by the problems of obtaining dollar exchange for dividend payments and repatriation of capital. At least in Western Europe this is generally no problem,

provided that the investment project has been screened and formally approved by the authorities. Even in France and the United Kingdom, where foreign exchange crises have been recurrent, approved investments have never had any difficulty in obtaining the necessary dollar allocations.

The damage done to foreign direct investments by foreign exchange devaluations is also exaggerated by the inexperienced. Such devaluations impose an immediate nominal loss in the dollar value of the foreign equity, but in time they usually increase correspondingly the earning power of the investment in local currency, owing to rising internal price levels and improved export potentials. In any case, no further EEC devaluations appear imminent, now that the French have restored their competitiveness by the devaluations of 1957 and 1958, and are undertaking the internal reforms required to rectify their imbalance of payments.

INVESTMENT CLIMATE

In general, the investment climate for the U.S. private investor in Western Europe is extremely good. Among EEC countries, Holland

TABLE 4
Intensity of U.S. Direct Investment
in 1957

	(Millions of Dollars)		
	Accumulated Total U.S. Direct Investment	GNP	Accumulated U.S. Investment as Percentage of GNP
West			
Germany	\$ 496	\$ 65,700	0.7
France	457	54,800	0.8
Italy	233	33,400	0.7
Benelux*	369	23,600	1.5
EEC Total	\$1,555	\$177,500	0.9
United Kingdom	\$1,899	\$ 69,200	2.7
Canada	\$8,332	\$ 30,900	26.9

* Luxembourg excluded.

SOURCE: European GNP from Table 2, roughly adjusted from 1955 base. United States investment figures from Samuel Pizer and Frederick Cutler, "Private Foreign Investments Near \$37 Billion," SURVEY OF CURRENT BUSINESS, XXXVIII (September, 1958), 18.

is outstanding in the cordiality of its reception to American investments and its devoted and efficient efforts to help foreign investments succeed. Belgium is strongly oriented toward private enterprise; American investments are welcome, particularly if approved by one of the Belgian banks that exercise a major directive influence in Belgium business. In Italy, American investment is welcomed by the Right and Center parties but sometimes resisted by the Left. Furthermore, it is subject to the potential threat of dangerous competition from the state-owned gas and oil monopoly, which, under able and ruthless management, is building up a diversified industrial empire.

In France and Germany, there are somewhat mixed feelings in the business community about U.S. investment. U.S. capital and know-how are usually valued, but there is occasional reluctance to share the nation's business opportunities with foreigners. Fre-

quently, U.S. investment is encouraged only in those industrial or geographic areas that have not proved sufficiently attractive to native investors, and where the nation's own efforts obviously require supplementation. Sometimes this is explained by genuine or pretended fears that American industry may take over too large a share of the nation's patrimony or achieve a position of industrial dominance. The Germans have even coined a name for it: *Überfremdung* (literally, over-foreignization).

In fact, however, there is little substance to such fears. As Table 4 shows, U.S. investment in EEC has only one-third the intensity (in relation to local production capabilities) of our investment in the United Kingdom and has only about one-third of the intensity of our investment in Canada. In relation to available business opportunities, let alone growth prospects, U.S. investment in EEC is still very slight.

ABOVE all things is it profitable to men to form communities and to unite themselves to one another by bonds which may make all of them as one man; and absolutely, it is profitable for them to do whatever may tend to strengthen their friendships.

—Baruch Spinoza

FOUNDATIONS OF THE MORAL LIFE

FRANK T. DEVYVER

The Weakening of Managerial Rights

*Australian management, with compulsory arbitration,
retains many rights yielded in the United States.*

THIS is a free country and we hope to keep it that way." This statement by a deputy registrar of the Arbitration Court in Sydney, Australia—where even the amount of foam on a glass of draught beer is regulated—will strike the average American as being odd. Australia has compulsory arbitration in labor matters. How can such a country be called "free"?

The fact is that, although many of its traditional rights are circumscribed by governmental agencies, Australian management in other areas has retained prerogatives given up by a large segment of its American counterpart under collective bargaining. In any recent year in the United States, over a hundred professors, as well as attorneys, clergymen, and professional arbitrators, eke out their salaries by deciding grievance cases involving traditional management responsibilities. Most of the grievances so arbitrated would never arise

in Australia, or, if they did, would be handled by federal or state officials rather than by privately selected arbitrators whose business experience has been limited to keeping their own accounts in balance.

COMPARATIVE POSITIONS

It is difficult to say how American management has reached the position of letting outsiders make final decisions on personnel matters. Presumably, historical study would disclose that the War Labor Board of World War II brought about a general acceptance of the arbitration of so-called rights disputes.¹ There was, of course, some precedence for this, since in some industries an impartial chairman had occasionally been used.

¹ Jesse Freidin and Francis J. Ulman, "Arbitration and the War Labor Board," *Harvard Law Review*, LVIII (1945), 309; in Frank Elkouri, *How Arbitration Works* (Washington: Bureau of National Affairs, 1952), p. 6.

Mr. de Vyver is Chairman of the Department of Economics and Business Administration at Duke University.

This discussion will be restricted to a comparison of the current status of American management's rights under collective bargaining and of managerial prerogatives under Australian compulsory arbitration.

Australian governments rather than the unions have penetrated the managerial function in many areas of personnel practices. Under the laws of the Commonwealth and the Australian states, arbitration courts or wage boards determine wages and hours. In the Commonwealth, the Conciliation and Arbitration Commission fixes the basic wage rate and standard hours, as well as the skill margins above the basic wage for each job classification. Management must pay the rates thus established; it retains control only of overaward rates when it chooses to pay them.

The Award System

In the areas of wages, hours, and fringe benefits, American unions and managements negotiate periodically and ordinarily settle these matters between themselves without interference by government or private arbitrators. Under the Australian award system, however, management is restricted in other ways. Awards may provide a rest period (called a tea break or crib time), overtime rates, sick pay, holiday pay, long-service leaves, and so on. In fact, an Australian award may specify such minute details as the proper amount of castor oil to be included in a first-aid kit.

Grievances and Victimization

In the area of managing workers, American employers retain less control than do Australian employers. Under collective bargaining, American management, when it has agreed to grievance procedures with arbitration as the terminal point, has surrendered its power to make final decisions concerning personnel.

Australian management is free to make its own decisions on personnel matters. It is true that Australian employers are forbidden to discriminate against a worker because of union

activities (victimization). However, in a country with over 65 per cent of its work force in unions, this institution is generally accepted, and discrimination is rarely practiced. Except for this restriction, similar to that under the American Taft-Hartley law, an Australian employer is free to manage his work force as he will.

THE EMPLOYMENT CONTRACT

Outstanding differences in management control in the two countries are reflected in the employment contract. In the United States, seniority is generally accepted as a basis for management decisions; in Australia, it is not. In the United States, a worker who completes his probationary period has a right to his job; in Australia, a worker has no such right. Many cases from the two countries illustrate the considerable differences in these areas.

American Limitations

In a statement with which few American employers would disagree, an American student writes,

"One of the most severe limitations upon the exercise of managerial discretion is the requirement of seniority recognition. . . . Collective agreements generally provide for the recognition of seniority in several, and often numerous, aspects of the employment relationships, among which are promotions, layoffs, rehiring, shift preference, vacations, and overtime work."²

Certainly, even unorganized plants recognize seniority as a relevant consideration. In such instances, no rights having been established, management may decide on the basis of factors other than seniority. When the usual contract is signed, however, management has surrendered this right, and the seniority provision establishes the new rights the unions have obtained for the workers.

² *How Arbitration Works*, p. 241.

In management areas where the parties have agreed to determination on the basis of its operation, seniority may be the only determining factor under the contract, or the contract may contain an equal ability clause. Such a modified or contingent clause may specify, for example, that seniority shall be the deciding factor when the senior employee is qualified for a position, or when the senior employee's skill and ability are equal to that of the other workers involved. Another common modification is that, for the purpose of layoffs, union shop stewards shall have top seniority during their terms of office.

With a straight seniority clause, management is without rights in areas of action covered by the clause. Presumably, any particular job may be done by any worker if he has been around long enough, or, as one writer puts it, the clause may be based on the philosophy of seniority that "the social claim of the older man should overrule both the needs of the business and the interest of the public in its efficient operation."³

Even modified seniority clauses do not guard management's right to make personnel decisions based on its judgment of merit and ability, for agreement to a seniority clause means that management usually agrees to arbitrate disputes under that clause. Therefore, although the first decision is usually management's, its judgment becomes subject to review by a third party. If management's decision is based on such objective data as tests, an arbitrator is likely to uphold the company. If, however, the supervisor's decision is based only on his judgment, formed after watching two workers over a long period, the arbitrator may rule for the union to the effect that the company has failed to prove that skill and ability are not equal or that a senior worker is not qualified.

In North Carolina, a Durham Hosiery Mills case reveals management's loss of authority and the reaction of arbitrators to cases of this

type. The mill, having installed new machinery, required several trained fixers. The training was done in part by representatives of the machinery company. In accordance with the collective agreement, the openings were posted when the job was ready. The contract provided for assigning the opening to the senior qualified bidder, but failed to state how and by whom the determination of bidders' qualifications was to be made. The arbitrator held that under such circumstances the employer could make the original determination on the basis of general prerogatives found in the management rights clause. He added, however, that such a decision could in turn be challenged by the union on the ground that the determination was not made in good faith or that it was based on error.

The company made its judgment on the basis of knowledge of its own employees and with the advice of the machinery manufacturer's representatives. The arbitrator contended that this was not enough, since the contract contained nothing about best-qualified workers. He ordered the older bidders placed on the jobs because

"the Company's refusal of a promotion to the senior bidder for a vacancy is not binding upon the arbitrator if he concludes from the evidence either (1) that the Company has not in good faith sought to determine whether the bidder was qualified or (2) that the Company has arbitrarily and without any support in the evidence determined to be unqualified a bidder shown to be qualified by clear and convincing proof."⁴

James J. Healy, a well-known arbitrator, speaking at an annual meeting of the National Academy of Arbitrators, noted this gradual decline over the years in the importance that arbitrators attach to ability as compared to seniority when dealing with layoffs and promotions. One reason for this trend, he thought, is the inherent vagueness of the term "ability," or qualifications, as compared to the relatively precise meaning of seniority. He also reported

³ Henry Clifton, Jr., "Management Functions," N.Y.U. First Annual Conference on Labor (1948), 89, 97; in *How Arbitration Works*, p. 242.

⁴ See *Labor Arbitration Reports*, Vol. XII: *Dispute Settlements* (Washington: U.S. Gov't Printing Office, 1949), p. 315.

a tendency of arbitrators to join with the union on the overemphasis of seniority because of its objective quality as compared to the subjective nature of the ability measurement. Furthermore, he thought he saw a tendency for arbitrators to shift the burden of proof to management, so that a senior worker does not have to prove that he is qualified. Rather, management must prove that he is *not* qualified.⁵

However it has happened, American management has given up the right to fill jobs according to its appraisal of the comparative ability of candidates. The agreement either will call for straight seniority or will permit the arbitrator to make the final decision concerning the qualifications of workers.

The Situation in Australia

Seniority is not a right in Australia except in a few instances in which management, acting outside the official arbitration system, has agreed to a modified version. Even in such cases, management retains the right to make final decisions concerning retention or promotion. It simply agrees to consider seniority when making these decisions.

In other words, Australian management and the several Australian labor courts may consider the seniority factor in personnel decisions, as do many nonunionized American employers. The difference is that Australian employers do not generally recognize seniority as the controlling factor, and they also usually retain the right to make final determinations about qualifications. In Australia, unions urge the use of seniority, particularly when a dismissal is involved. However, the courts and the state organizations, when dealing with labor matters, firmly resist decisions based on strict seniority as being interference with management's responsibilities.

Chief Commissioner George A. Mooney, dealing with a 1953 dispute between the

Tivoli Circuit of Melbourne and the Musicians' Union, clearly stated the federal court's position. The union had asked that certain employees who had been on tour for the Circuit supplant other workers with less seniority.

After telling the union that the court had no right to force an employer to hire any worker, Mr. Mooney concluded:

"All these men are members of your Union, and there is no right to any permanent employment in this case, or in any of the cases. Certain Unions have said that it is the Union's principle that the last to come shall be the first to go, but no business can necessarily run on that line, because eventually they would all have superannuated employees."⁶

Other federal officers have upheld this principle. So well-established is management's right to its own judgment that Australian workers who are employed under federal awards seldom claim during disputes that seniority should prevail. Only two or three of the more than 200 disputes threatening or involving direct action in 1953-54 involved matters of seniority. In their decisions or comments, commissioners made it clear that employers—not the federal arbitration authorities—would decide on retention or promotion of employees because of seniority.

In 1953, the New South Wales Industrial Commission took a similar position. The court would accept seniority only if there had been a firm, definite, and clear custom of using it. In the absence of such a custom, the court ruled that if the employer first weighed seniority, he has the right to demote or retrench men who have seniority.

At a compulsory conference on some redundancy charges, the concluding statement to the union was,

"Other things being equal seniority prevails. But when it comes to a dispute as to whether other things are equal or not the employer has

⁵ James J. Healy, "The Factor of Ability in Labor Relations," in *Arbitration Today*, Proceedings of the Eighth Annual Meeting, National Academy of Arbitrators (Washington: Bureau of National Affairs, 1955), p. 50.

⁶ Minutes of Section 14 disputes, Sept. 28, 1953 (typescript material at Industrial Registrar's Office, Melbourne, Australia).

the right to say whether they are or not. That can be challenged before this tribunal, but this tribunal does not take the attitude that it substitutes its attitude for that of the employer. There has to be some sort of industrial reason, because it is the employer who pays who has the right to hire and fire. There is no get-away from that. It is no good butting your heads up against that."⁷

Seniority in Redundancy Discharges

Many unions demand that seniority be made the determining factor in redundancy discharges. However, layoffs because of lack of work are relatively unknown in Australia. When there is insufficient work, employees are discharged, and these discharges are said to be caused by redundancy.

A number of unions, whose members worked at the St. Mary's defense project in New South Wales under a state establishment award, advised the Utah Construction Company that those with the longest service should have some priority when retrenchment comes. The dispute came before the Industrial Council, a unique organization of three representatives from the employer and three from the unions, and chaired by a judge who is the President of the N.S.W. Industrial Commission. In a unanimous decision, the Council found some merit in the union's contention, and the employer agreed with the Council's suggestion to study carefully everything pertinent to a man's employment before he is discharged.

The Council merely advised the employer to give consideration to seniority and to discuss with the union cases in which seniority was an issue. The Council agreed to consider any case unsolved after union-management negotiations, although it would not, of course, order one employee retained and another sep-

arated. While they urged the employer "to adopt every practical means of ensuring the fair thing is done in each instance," the Council, when stating the rules for the fair thing, introduced them with the statement: "The employer's right to dismiss an employee cannot be called into question, nor can the employee's right to leave his employment be questioned."⁸

These Council proceedings reiterated the principle that management should consider seniority and, other things being equal, follow it. However, it also specified that management, not an arbitrator, determine whether other things are equal.

EMPLOYEE DISCIPLINE

Seniority and its administration are issues in many American arbitration cases. The largest number of cases, however, involve discipline and discharge. In this area, too, the situation in the United States under collective bargaining differs from that found in Australia.

American unions make job security clauses the central theme of their nonwage demands. Employer acquiescence and agreements to arbitrate disputes have placed in the hands of arbitrators the power, through precedent-making decisions, to establish employers' personnel policies. In other words, management has turned over to outsiders its responsibility for a major business policy.

Rights and Obligations

Many American collective agreements contain, in addition to an arbitration clause, one in which the employer agrees to discipline or discharge only for just cause and with due regard to the reasonable rights of the employees. Arbitrators more often sustain discipline than discharge. The American Arbitration Association reports that only 46.4 per

⁷ Industrial Commission on New South Wales (typescript of Compulsory Conferences, Case 43, Feb. 26, 1953). Italics mine. Interviews with employers, unions, and government officials indicate that with few exceptions, such as the coal mines or the railroads and in some governmental operations, straight seniority is not the custom in Australia.

⁸ Minutes of the Industrial Council for St. Mary's Project, Aug. 3, 1956 (typescript material at office of Industrial Registrar for New South Wales Industrial Commission, Sydney, Australia).

cent of the discharge cases were sustained; in 18.7 per cent, the employer was compelled to reinstate the discharged worker with full back pay; in the remaining 34.9 per cent, split decisions, usually calling for reinstatement with back pay, were rendered. Of the cases involving discipline but not discharge, the actions of employers were upheld in 56.3 per cent, reversed in 33.3 per cent, and partly sustained in the other 10.4 per cent.⁹

American arbitrators have often defined rights and obligations inherent in clauses providing discipline and/or discharge for just cause. Furthermore, they have not hesitated to substitute their judgments for those of management in deciding the proper penalty for any particular case.

The following statement is typical of rulings concerning the meaning of just cause:

"'Just cause,' is a general concept which can best be given definition by specific application to concrete cases. However, the concept carries with it certain obvious implications. Any disciplinary action against an employee which is unjust, arbitrary, capricious, or which fails to possess any reasonable foundation for its support is discipline without 'just cause.' Furthermore, discipline not amounting to arbitrary or capricious action also lacks just cause if the penalty which the Company has imposed bears no reasonable relationship to the degree of the alleged offense."¹⁰

Cases in Arbitration

Obviously, when management agrees to discipline only for just cause and with due regard to the reasonable rights of the employees, the arbitrator has been given the right to establish personnel policies for that company. An example of how this is done may be found in several cases involving attempts on the part of a textile company to tighten its standards of performance. It introduced a system of warn-

ings that, if not heeded, would be followed by discharge. The union, not liking the system, brought grievances when several of its members were subjected to warnings or disciplinary layoffs. In 1949, an arbitrator who felt that the company's plan met his definition of just cause upheld the system of progressive discipline.

The mill management, for reasons that it considered adequate, added to the 1949 system of penalties an additional penalty that was applicable to weavers when gross negligence on their jobs resulted in the production of seconds. However, the arbitrator would have none of this. In February, 1954, he held and explained his position that the system of job-neglect warnings and discipline was arbitrary and unreasonable.

Accordingly, in March, 1954, after studying the arbitrator's award, the company changed its discipline procedures to satisfy his objections. The union, however, was not satisfied, and it attacked the new system. This time, a different arbitrator upheld the new system and the actions taken under it.¹¹ Given the same facts, he might just as well have found that further changes in the system were necessary before he would accept it.

Whether the company's disciplinary procedure was sound or not, an arbitrator had been empowered by contract to reject or modify a management program that was designed to improve the quality of its production. The mill subsequently changed its program to meet the arbitrator's objection.

Other companies have changed their procedures when arbitrators have ruled that discharge was too severe a penalty for using abusive language to a foreman if it were the first time; or that there should have been two warnings rather than one for smoking on the job, staying away from work, or in other instances where factory discipline must apply. In fact, in organized plants, the principle is well-established that outsiders rather than

⁹ *Procedural and Substantive Aspects of Labor-Management Arbitration* (New York: American Arbitration Association, 1958), p. 27.

¹⁰ See *Labor Arbitration Reports*, Vol. XVI: *Dispute Settlements* (Washington: U.S. Gov't Printing Office, 1951), p. 468.

¹¹ Typescript decisions of Erwin Mills, Inc. case, Dec. 29, 1949; Feb. 9 and Oct. 6, 1954, in author's possession.

management have the final decision concerning discipline.

Paul A. King, a labor law expert, summarized this position in his article in *Factory Management and Maintenance*:

"Arbitrators who handle 10 discipline cases for every one that comes before a plant executive, have developed a 'feel' for employee relations. Whether or not you agree with their conclusions, they have laid down the rules for administering plant discipline. You must play by these rules if you operate under an arbitration clause."¹²

Australian Parallels

Because no Australian worker is supposed to have a right to a job, no arbitrator may order an employer to reinstate an employee, pay him back pay, or modify any disciplinary action that has been taken. A federal arbitration court has no power to reinstate a worker, although one who believes himself to have been victimized may take his case to a civil court and win reinstatement if the court finds the employer guilty. Some state laws include similar provisions. In New South Wales, however, the Industrial Commission can order a victimized employee to be reinstated in his job. Discharge for union activity is not a major Australian problem; unions and union activity are taken for granted.

Lack of job security is part of the industrial relations picture in England and New Zealand as well as in Australia. Apparently, it is generally accepted in these countries that even as no government can force one man to work for another, so no government can force an employer to keep any particular individual in his employ. Legally, this is also the situation in America, except when union discrimination has been practiced. By collective bargaining, American employers have given up this right. In Australia, although the employment contract is well-regulated by government, the

employer retains the right to discharge or keep any individual in his employ.

Australian awards all contain an employment section or a section called "Terms of Engagement." Although differing in details, these sections establish a period of employment ranging from a day or less to a week, although employment for professional people may be on a monthly basis. This means that workers able and willing to work are guaranteed employment for the prescribed period. It also means that a worker must, for example, give a week's notice before quitting, and the employer must give the same notice before discharge. If a worker leaves without giving the prescribed notice, the employer may withhold any wages due him. The employer, on the other hand, may discharge a worker without notice on grounds of inefficiency, malingering, misconduct, or neglect of duty. Should such a case of summary dismissal come before an arbitration court, even though the decision is that no misconduct was involved, it merely orders payment of a week's wages and such accumulated rights as holiday pay or sick leave pay in lieu of notice.

These firmly established principles are well illustrated by comments of judges and commissioners both off and on the record. Speaking at a compulsory conference called to settle a dispute over a union delegate's dismissal, a judge of the N.S.W. Industrial Court gave a clear statement of the state law:

"First, the Commission lays down by award a code of conditions. Amongst these conditions is usually, and one finds it here, a condition relating to termination of employment. It gives rights and implies obligations. It gives the right to an employer to terminate employment by reasonable notice, in this case one week. It gives the right to an employee to terminate his engagement by giving one week's notice. Ordinarily an employer may terminate employment pursuant to that clause without giving any reason, and an employee may decide no longer to work for a particular company in this industry without giving any reason. So far as the law laid down by the award is concerned, the employer has it in his power to dismiss, and the

¹² Paul A. King, "Tips to Successful Discipline," *Factory Management and Maintenance*, CXVI (June, 1958), 79.

employee has it in his power to go, provided only that the notice required by the award is given."¹³

The judge then said that the Commission could intervene in cases involving victimization, "not because the Commission thinks it should substitute its judgment for that of the employer but because it is satisfied that the termination of employment was not for a legitimate reason but was because the employer decided to victimise or treat unfairly a particular employee. . . . The onus is upon the Union to satisfy the Commission that this is a case of victimisation."

A few years ago, another judge of the N.S.W. Industrial Commission upheld the discharge of 12 of 13 shop stewards separated from the St. Mary's federal defense project for refusing to disband an unauthorized meeting of shop stewards on company property during working hours. The council recommended the reinstatement of the thirteenth man because he had not been with the group when they had been told to get back to work. These discharges were not victimization. These men had disobeyed orders and had been summarily dismissed. The fact that they were union stewards was immaterial.¹⁴

Federal officials take the same position. In one case, the Commissioner clearly stated the philosophy of the law.

"An employee has the right to leave whenever he likes, provided he gives reasonable notice. If that is so, it stands to reason that the employer is given an equal right. If the Court has the right to say that the employer is to employ a particular employee in perpetuity, then it also has the right to say an employee must work for that particular employer in perpetuity. That would be called conscription of labour, and when you conscript the employer, I do not

know what you would call it and most unions, of course, would object to conscription of labour."¹⁵

The Employer's "Way Out"

Rather than take the easy way of giving a week's notice or a week's pay in lieu of notice, employers often use the section of the award allowing summary dismissal for misconduct, inefficiency, malingering, or neglect of duty. Such dismissals may be appealed to a board of reference, which is a tripartite board established under the terms of an award, or to a commissioner. After hearing the details, the board or the commissioner will side quite often with the employer.

Unlike similar cases in America, a decision in the worker's favor merely orders the employer to give the worker the required pay in lieu of notice. Nor does the union argue re-employment before commissioners or boards. In one case, when I asked the chief executive of a large union why he had not pressed for reinstatement, he, apparently surprised at the question, replied that reinstatement would accomplish nothing since the employer could immediately give the worker a week's notice.

The laws on the subject are clear, as is the practice before Commonwealth and state boards and commissions. Militant unions, however, engage in direct action when they feel that one of their members has been unfairly treated. They know that no one can order his reinstatement, but they also know that sometimes conciliators or chairmen of compulsory conferences are able to coax an employer to rehire a man, and that an employer will occasionally capitulate before a show of strength.

It is in the areas of seniority and discipline that American unions, through collective bargaining, have made the greatest inroads into traditional areas of management. There are, however, other areas that have been invaded.

¹³ Typescripts of Industrial Commission of New South Wales of Compulsory Conferences, Vol. I, Case No. 60, Oct. 23, 1952.

¹⁴ Minutes of the Industrial Council for St. Mary's Project, June 13, 1956 (typescript at Industrial Registrar's Office, Sydney).

¹⁵ Minutes of Section 14 disputes, Sept. 28, 1953.

RIGHT OF TRANSFER

One such area involves the right of transfer. There is little uniformity here in American contracts. In some agreements, management has the prerogative to transfer employees within the plant; in other agreements, there are many restrictions on this right.

Limitations

Distinctions are often made between permanent transfers, which may be called job transfers, and temporary or duty transfers. Job transfers are more likely to be controlled by a contract clause that requires the employee or the union to agree to the transfer, because seniority is involved in such permanent changes. Temporary transfers are generally left to the discretion of management, subject to the condition that a worker's earnings during transfer are guaranteed and a time limit is enforced.

A contract may also limit transfers to those necessary for the conduct of the business. Arbitrators occasionally have to rule whether a transfer was of duties or of a job, and are sometimes asked to substitute their judgment for that of management concerning the need for a particular transfer.

Pay Protection

Another section of the agreement protects the pay of transferred workers. Very few grievances arise under such transfer sections, although from time to time a worker may think that someone other than himself should have been transferred and claim that his transfer was therefore unnecessary. In such cases, an arbitrator substitutes his judgment for that of management concerning the necessity of the transfer. Frequently, it is held that the company does not have the right to transfer a worker merely because it seems expedient to do so.

It may be argued that companies do err in making transfers. The fact remains, however, that American management, through collective bargaining, has given up a right of operation still held by Australian management.

The Australian Situation

The problem of transfer in Australia seldom arises. Permanent transfers are rarely used because the work contract seldom runs more than a week. If necessary, an employer may give a week's notice to a worker and then rehire him for another job. The absence of seniority provisions also facilitates changes from one job to another.

Although temporary transfers or the assignment of new duties are not seriously restricted by rule or by law, there are some factors that should be considered. Pay, for example, is guaranteed by the mixed-function clause, which is a part of most awards. A typical clause reads, "An employee engaged for more than half of one day or shift on duties under this or any other award of determination or industrial agreement carrying a higher rate than his or her classification shall be paid the higher rate for such day or shift. If for less than one half of one day or shift, he or she shall be paid the higher rate for the time so worked."¹⁶

Another limiting factor in temporary transfers is the number of unions having members in a plant. An employer may have the right to ask one maintenance worker to do another's job, but he chances a serious jurisdictional or demarcation dispute when he does so. The work may be considered to be covered by another union.

Transfer is likely to be more common among process workers. Management is free to act in this area, subject to an award's wage restrictions. Commissioners would probably expect the employer to use restraint. Unfortunately, no records for the years on which this discussion is based are available on any transfer dispute in which a decision was made.

Speaking at a compulsory conference, one of the judges of the New South Wales Industrial Commission presented his views on the subject. The case involved pay rates and, as

¹⁶ 1955 Textile Award, Section 18, in *Commonwealth Arbitration Reports* (Melbourne: Commonwealth of Australia, 1955), Vol. LXXXIII, p. 488.

an award interpretation matter, had to go to the full industrial court. In referring the case, the single judge included remarks on transfers.

"All I can say is they can transfer a man to meet the needs of the industry, but I do not think a man should be a perambulating worker. I think the onus is upon the employer to establish that the transfer or transfers are required to meet the needs of the industry. It doesn't give them a completely open right to transfer employees to meet the needs of the industry, but no such transfer should be made in my view unless it can be said it is reasonably required to meet the needs of the industry."¹⁷

MERIT INCREASES

The granting of merit increases in the United States is "an appropriate subject for collective bargaining, and bargaining thereon frequently results in contractual provisions establishing objective standards for merit increases or fixing a regular review period or making such increases subject to review or negotiation by the union, or other types of such provisions."¹⁸

American Settlements

By agreement, management has abrogated its rights. In the absence of such abrogation, American arbitrators have generally held that management still retains the right to decide when individual employees are to receive merit increases.

Merit increase sections, like most sections of collective bargaining agreements, are usually subject to the grievance procedure and hence to arbitration. If a worker or a union feels that a man's merit has been improperly recognized, an arbitrator may so decide. Arbitrators generally hesitate to interfere with management's judgment on these matters; nevertheless, they will do so if the refusal of increase was, in their judgment, based on capricious or discriminatory grounds.

¹⁷ Transcripts of N.S.W. Compulsory Conferences, Vol. I, Case No. 58, March 30, 1951.

¹⁸ *How Arbitration Works*, p. 260.

Australian Determinations

In Australia, merit increases are controlled by employers. Legally, awards or wage board determinations are minimum rates, so that an employer paying the basic wage plus the required skill margin is fulfilling his obligations. What he pays above the minimum is his business, and such overaward payments are often made. Unions, however, may oppose the payments if they consider the merit increase to be a bonus payment for individual production. This is an incentive scheme upon which many Australian unions frown.

The experience of C.S.R. Chemicals, a subsidiary company of the Colonial Sugar Refining Company of Australia, illustrates the use both of a formal merit rating system and of union reaction. The scheme provides quarterly ratings of individual workers and adjustment of pay in accordance with those ratings. At first, a number of unions, apparently thinking the plan was for individual incentives rather than for merit increases, instructed their members to have no part in it. The extra pay for merit earned by members of unions opposing the plan was held in escrow for the workers, and the unions soon either withdrew their opposition or tacitly accepted the plan. Writing after six years' experience, the factory manager said, "As far as the Trade Unions are concerned the scheme has been accepted and the Unions are satisfied that it does not operate as an infringement of their Union principles."¹⁹

After the unions were sure that the plan was not an individual production incentive system, opposition disappeared. However, each employee is individually rated by his supervisor, and the worker's overaward payment depends on that rating, in which the union has no part.

Other plants without the trappings of a formal merit rating system have also differentiated between workers in fixing overaward rates. In Australia, such payments remain management's prerogative without interference either by unions or by arbitrators.

¹⁹ Memorandum to author, March, 1957.

A SUMMING UP

American management has retained many rights given up by Australian employers. Unorganized firms in the United States may make unilateral decisions about all labor matters. Even in organized plants, management and unions negotiate over items that in Australia are determined by government agencies. In fact, Australian businessmen are subject to detailed regulations. Wages and working conditions are all strictly and uniformly regulated by industry or craft. Yet Australian management has retained control of its work force, a control largely given up by American management under collective bargaining.

Saul Wallen, a well-known American arbitrator, in ruling that every discharge was arbitrable no matter what the contract said, summarized the situation in the United States.

"In our opinion, the meaning of the contract, when viewed as a whole is that a limitation on the employer's right to discharge was created with the birth of the instrument. Both the necessity for maintaining the integrity of the contract's component parts and the very nature of collective bargaining agreements are the bases for this conclusion. Inasmuch as this limitation is an implied term of the contract discharges are subject to the grievance procedure and arbitration."²⁰

²⁰ *Labor Arbitration Reports*, Vol. XIII: *Dispute Settlements* (Washington: U.S. Gov't Printing Office, 1950), p. 750.

Citing this statement with approval, the Connecticut State Board of Mediation and Arbitration ruled in another case,

"If a Company can discharge without cause, it can lay off without cause. It can recall, transfer, or promote in violation of the seniority provisions simply by invoking its claimed right to discharge. Thus, to interpret the Agreement in accord with the claim of the Company would reduce to a nullity the fundamental provision of a labor-management agreement—the security of a worker on his job."²¹

In Australia, compulsory arbitration has meant that management has lost its rights to determine wages, hours, and certain fringe benefits, although conditions better than the award system may be provided if management so desires. In the United States, management makes its own decisions in these areas either unilaterally or through collective bargaining. On the other hand, in Australia, where the worker has no security on his job except protection against discharge for union activity, management has retained control of the work force.

In the United States, where, by collective bargaining, seniority has been made a ruling factor for many decisions and where the very meaning of a labor-management agreement is job security for a worker, management has surrendered its traditional rights. It has delivered itself into the hands of outsiders.

²¹ *Labor Arbitration Reports*, Vol. XIII: *Dispute Settlements*, p. 749.

THE knowledge of the world is only to be acquired in the world, and not in a closet.

—Philip Stanhope, *Earl of Chesterfield*

HERMAN B WELLS

Investment in Survival

*Education is one of our most important weapons
in our ideological conflict with the Soviet Union.*

AMERICAN higher education is not a failure. It is not largely misdirected. It is not out-classed. As it stands, it has a promising future. It requires no wrenching, revolutionary reforms. But it is gravely challenged, and it has certain needs that insistently demand attention.

I have two propositions to advance concerning these needs. One is that we need to invest more in higher education. The other is that we need to invest what we invest as wisely as possible.

Last summer I had the good fortune to be a member of a seven-man team of American university presidents who traveled to the Soviet Union under State Department auspices to observe Soviet higher education. We studied the Soviet system as closely as we could in a short stay and some 8,000 miles' travel within the U.S.S.R.

We were impressed by much of what we saw and, as "competitive co-existors," were disturbed and challenged by certain implications for American higher education, although I should hasten to emphasize that none of us was overawed.

Dr. Wells is President of Indiana University, Bloomington, Indiana.

We did not find Soviet standards of scholarship or instruction uniformly more rigorous than our own, let alone intrinsically higher when one takes account of the far greater freedom for inquiry in our system. We found the Soviet curriculum excessively fragmented and specialized, and saw that it exhibited some serious gaps, especially in the behavioral sciences.

We found a system of higher education that, from our point of view, was outlandishly regimented—in curricula, in assignment of students to fields of study, in choice of teaching methods, in textbooks and other teaching materials, and in many other matters.

All the same, no one could fail to be enormously impressed with the scope of the Soviet effort. It already provides an opportunity for higher education for almost as large a proportion of their secondary school graduates as we provide for ours. Much of Soviet education is housed in fine structures with excellent laboratories and remarkably extensive libraries. While Soviet statistics always need to be accepted with some reservations, from what we could determine from the figures made available to us, between 2 and 3 per cent of the gross national product is presently going to higher education. This compares with just

about 1 per cent in the United States. The fact that our national output is still by far the higher of the two is no sufficient explanation of this discrepancy. For ordinarily we would expect the wealthier of two societies to make a larger, not smaller, relative provision for advanced education.

Nor could we help being impressed with the *momentum* that higher education plainly has acquired in the Soviet Union. Illiteracy, even on the steppes of Central Asia, is being wiped out at a remarkable pace, and reading—even the reading of Western and prerevolutionary Russian classics—has become a mass phenomenon. Some 800,000 workers are pursuing regular university degrees by correspondence courses, and their industries release them at full pay for two months each year to complete courses and take examinations at their various schools. This momentum, however, is not merely a matter of the quantitative growth. Even more significantly, it involves the central position, by deliberate Communist Party design, that intellectual activity in general and higher education in particular have come to occupy in Soviet culture. Most impressive to an American academician is the tremendous prestige of the professor. He earns as much as the top industrial managers; his compensation is the highest of all professionals save a handful of artists. He is given especially commodious quarters and other perquisites that, in Soviet society, are the marks of prestige.

Certainly the Soviet comparison suggests that we *do* need to invest more in higher education in the United States; that the resources we devote to our colleges and universities should not rise simply in proportion to the continued growth in national output that we confidently expect, but should claim a significantly larger share of the total; and that it requires no literary license to call such outlays an investment in survival.

IT WOULD be a grievous error if, in our anxiety over the Soviet comparison, we tried to transform our educational system into the instru-

ment for specialized training and indoctrination that theirs has so largely become. But it would be equally erroneous to think that our own freer, more diverse, more liberal, more deeply rooted system of higher education is any less essential to the long-run competitive strength of our free society than their system is to their society.

However, I want to emphasize that our need to invest more in our colleges and universities would be almost as urgent as it is now, even if there were no Soviet Union or if we could be assured of permanent and absolute peace tomorrow. First, there is the wave of additional students that, as everyone has heard—and quite rightly heard—is due to begin flooding our campuses in the next year or two and to keep mounting throughout the 1960's. Second, there is the insistence by our increasingly affluent society on new and richer intellectual opportunities. And finally, there is the demand by our ever more complex, technical society, not only for more and better technicians, but also for more sophisticated generalists and integrators in nearly all fields of academic endeavor, both in the world of scholarship and in the world of practical affairs.

Like most of my colleagues in education, therefore, I am deeply anxious that a greater fraction of our national abundance be invested in higher education. I am concerned, too, with the sources that will provide additional funds. Naturally, as the representative of a state university, I am eager that for the public institutions, a reasonable portion be provided by legislative appropriation. In fact, we need to develop more equitable and flexible state and local tax systems if there is to be sufficient growth in our public colleges and universities as well as in other essential public services and facilities.

But I am equally concerned that there be growing resources for our private institutions. In Indiana, we have just about a 50-50 split between the undergraduate enrollments of our private and our public colleges and universities; in the nation as a whole the ratio is not too different. It seems to me essential that this

private-public division of labor in the American college and university system be preserved. In Indiana, through the Indiana Conference on Higher Education of which the major 29 private and the 4 public institutions are members, we have taken the necessary steps to preserve the balance. This means, however, that private financing as well as private enrollments must expand apace with public financing and enrollment. It means, moreover, that the private schools cannot solve their problems by charging a much greater proportion of the cost to the student, thus reserving themselves for the economically elite. Finally, if the balance is to remain a true balance, the private institutions cannot safely rely increasingly on federal government support. In short, there must be a vigorous step-up growth in alumni, foundation, corporate, and other giving to the private institutions.

It is essential too that legislatures and private donors fit their manner of support to our needs. In particular, I hope they may avoid the error of thinking that additional scholarships can solve the economic problems of higher education. Please do not mistake me. There is a need for additional scholarship funds; some of our gifted youngsters are still cut off by economic barriers from college and from the productive careers that lie beyond. But student fees do not nearly cover anything like the full costs of a good college or university education. Thus, more scholarship money, meaning more students, unless supplemented with funds for general operating expenses, actually aggravates, not alleviates, the financial problems of our colleges and universities.

Even with the best of fortune, educational resources will not be unlimited. Nor will they be sufficient to accomplish at once all of the eminently worthy purposes to which additional funds could be put in our colleges and universities. Thus, we must do some hard-headed planning and budgeting. We must, above all, assign an order of priorities among the many good uses that could be made of additional funds and then stick to it.

At this juncture in American higher education there simply can be no doubt about

which requirement for increased resources must be assigned the top priority in any such rational planning. It is the need for higher faculty salaries. If this requirement is not met, there will be little point in other expenditures on improved facilities and services in higher education. For no matter how new and shiny the 1970 classrooms may be, and how full of students and how generous their scholarships, little will be happening inside them. The men and women presiding over many of these classrooms will be third-raters.

Although this is a familiar point by now, I would like to underscore the most emphatic statements of it that have been made. We do not have to rest the case for radically improved faculty compensation on the Soviet example. We can rest it squarely on the economics of the free professional labor market in this country. Real faculty salaries in the United States must at least double by 1970. Only then can the teaching profession regain its pre-World War II competitive position in the market for intellectual talent. Doubling faculty salaries by 1970 must be our minimum goal.

Unless the flow of new revenues to the colleges and universities exceeds even the fondest hopes of an optimist like myself, this minimum salary goal cannot be achieved without some relative squeezing of the other elements in our institutional budgets. However, highest priority for salaries need not mean hardship for any worthy aspect of higher education if those of us on the governing boards, in the administrations, and on the faculties of our institutions can bring a little more imagination, still more inventiveness, and a little more ruthless logic to the problem of economizing our scarce resources—"economizing" in the proper sense, that is.

IN the first place, we must not only raise faculty salaries; we must try to find means to raise the productivity of our faculties. This is not a wishful, unattainable objective. There are many concrete ways of implementing it. We can do a better job of keeping important existing courses up-to-date and rely less on

new specialized courses that splinter our curricula. Such new communication devices as closed-circuit television are not panaceas but can become valuable and labor-saving instructional tools. We can spoon-feed our students less and require them to assume greater responsibility for learning by encouraging independent study and breaking down the idea that most learning occurs in the classroom. And certainly, the average American professor, who today has about as much clerical and secretarial assistance as the average American grocer, can be made substantially more productive if we give him more low-cost help.

Such reforms will not be easy. Some require changes of habit. Others entail breaks with tradition. And some require us to spend some money in order to save more money. But they can be accomplished; and if they are, they would make possible higher student-faculty ratios in certain circumstances without impairing the quality of instruction.

This leads to my second point about economizing in higher education: The kind of reforms I have just sketched can be carried out efficiently and constructively only in individual colleges and universities with expanding enrollments. Only then can the student-faculty ratio be raised without constricting the influx of new staff with its vital contribution of new perspectives and new ideas. And only in a climate of expansion can vested faculty interest in existing proliferated curricula be softened.

Growth has always been the most challenging, stimulating environment for American institutions of all sorts, and so it is for our colleges and universities today. I know of no American institution of higher learning so large that it cannot expand further. And we have hundreds upon hundreds of tiny institutions all across the land that could teach more effectively and operate more efficiently if they were a good deal larger. As a general rule,

then, it is not only the socially responsible policy, but also the self-interested policy, for existing institutions to plan to expand their individual enrollments roughly in step with the growth in national enrollments, and I emphasize that this applies as much to private institutions as to public.

This leads, finally, to my third principle for sound economizing in higher education: We should, for the most part, *build upon our existing colleges and universities*, not establish new ones. Remember that we already have more than 1,800 colleges and universities and that, while the geographical distribution is not ideal, the vast majority of American students live within a couple of hours' drive of several accredited institutions. There may be a few exceptional areas where we do need more colleges. But in general our planning should recognize that it would be far more expensive, far more difficult in terms of staffing, and far riskier in terms of the maintenance of academic standards to handle our expanding enrollments by building new institutions than by efficiently using existing ones.

THE task of economizing our use of resources in American higher education during the next few years may be a difficult and sometimes unpopular one. However, there is, I think, enough wisdom and enough earnestness of purpose in our colleges and universities to justify confidence in the future.

Certainly there is if, as I believe, Americans are becoming sufficiently aroused to invest, through both public and private channels, a substantially larger fraction of our abundance in this the most strategic of all means for forming social capital. Not only am I wholly confident that we then shall meet the Soviet educational challenge; more so, I am confident that our colleges and universities will supply our own burgeoning free society with the intellectual leaven it deserves and needs.

THE ASSISTANT

idle

or vital?

IS THERE A PLACE in business organization for the position of assistant? Some companies have assistants for most major positions; others have gone so far as to say, "No assistants!" As with any other business practice, the use of assistants depends on individual circumstances. In some situations it would be unwise to employ assistants; in others, it may be essential.

WHEN TO USE?

Assistants may be of two types: *first*, the personal assistant with a limited set of duties and no major supervisory responsibilities; or *second*, the full assistant who shares the principal's total responsibilities.¹

Mr. Anderson, making his second appearance in Business Horizons, is Organization Counselor for the United States Steel Corporation.

The personal assistant may have two types of responsibilities: *first*, a regular continuing activity; or *second*, diversified assignments varying in type and duration. In either case he will have no authority over the principal's other subordinates, except as may be specifically assigned. Some titles commonly used are, "staff assistant," "assistant-to," "administrative assistant," "special assistant," or "executive assistant."

The personal assistant may help draw up plans, interpret them to others, or keep the principal advised on their execution. In situations where an indirect approach is desirable, he may seek out opinions of others on matters of interest to his principal. Or he may perform miscellaneous co-ordinating or expediting services.

In many situations a personal assistant will help the president review and develop the company budget, develop and maintain an executive compensation structure, or consolidate a company-wide long-range planning program—in short, assist him with over-all administration through performing segments of tasks that must remain with the chief executive.

Need for a personal assistant may arise in a number of ways. When the principal is faced with any of the following situations, a personal assistant may be in order:

- When the principal's responsibilities require detailed analysis and appraisal
- When a segment of his job requires an understanding of technical matters outside his experience
- When he serves on a number of committees for which he must analyze and evaluate complex circumstances
- When there is much routine correspondence

¹ A third type is sometimes considered where the principal assigns a share of his total responsibilities to each of several subordinates. Since this is actually only the situation normally found in any supervisor-subordinate relationship, it will not be considered in the assistant classification in the following discussion.

- When there are routine documents to prepare or approve
- When there are many contacts outside the company

The personal assistant, by taking over administrative routines, permits the principal to supervise a larger number of people. Thus, with a greater number of people reporting to each management position, the organization would require a fewer number of managers. This in turn would facilitate communication by reducing the number of communication "channels."

The personal assistant position may also provide a training ground for younger men. The intimate knowledge of an organization's inner workings gained from first-hand observations can be a valuable aid to future practice.

Finally, the position may provide a place for the older, experienced man who, for reasons of health or in preparation for retirement, requires a less strenuous position. Unfortunately, this type of position has too often been a "dumping ground." But when it fulfills a real need and when the individual's experience would otherwise be lost, the position serves a substantial purpose.

The full assistant assists the principal in his total responsibility, supervises all other subordinates, and acts for the principal in his absence. He may be given more limited scope in certain situations. For instance, he may act for the principal only in the latter's absence; or subordinates may receive supervision from the principal in some instances and from the assistant in others.

The full assistant has a unique place in the enterprise. It is one of the few situations where a supervisor directly supervises just one other person and where two different people have approximately the same duties.

There are five situations where a full assistant might be employed to good advantage.

First, where the principal has heavy responsibilities outside his own unit. He may serve on committees; he may have contacts outside the company, as with customers or indus-

try associations. The assistant here relieves the principal of administrative detail and frees him to assume these other responsibilities and still keep abreast of critical internal affairs.

Second, where the principal has extensive long-range planning responsibilities. An engineering executive, for example, may have responsibility for planning future facilities; and he may need someone to administer the day-to-day affairs of his department.

Third, where subordinates require close coordination on a day-to-day basis, as when the tasks of subassembly workers must be co-ordinated with those in assembly to assure the continuous flow of material for production. The use of an assistant here would keep operations going during unavoidable and necessary absences of one or the other.

Fourth, where a replacement is being trained for the principal. This could result from either pending retirement or transfer of the principal. The assistant position here presumably would be of temporary duration.

Fifth, to supplement the experience of the principal. For instance, the administrator of a research department who is not a scientist himself might appoint a scientist as his assistant to guide him on technical matters. (In most cases, this purpose would probably better be served through using the personal assistant.)

HOW TO USE?

In the absence of the above conditions, the use of assistants may be unnecessary and may even reflect organizational weaknesses. But the use of assistants has often been criticized on broader grounds. The following are some of the administrative problems encountered in using assistants.

Handicap or Benefit?

If the principal would delegate, it is argued, a full assistant would be unnecessary. Better delegation would assign activities to appropriate subordinates, thus leaving with the principal only essential managerial duties.

While there are undoubtedly many situations where delegation would improve administration, delegation alone is not always enough. Obviously, if all the principal's functions could be delegated, there would be no use for the principal in the first place. But if the position is necessary, an assistant could facilitate management under any of the five situations described above.

It is also argued that the full assistant, by adding another level of supervision, imposes a barrier to communication. Of course, communication can be hampered by increasing the number of levels; but if the position is needed and if the assistant maintains proper relations with his principal and subordinates, there need be no barrier. In fact, quite the opposite might be true. An assistant can actually facilitate communication if the press of outside matters has made the principal inaccessible.

Further, it is contended that with a full assistant the principal will lose touch with his unit's activities. Actually, the assistant should relieve the principal of routine details and thus give him more time for essential affairs. If the principal does lose touch, the fault lies with the manner of administration—not with the existence of an assistant. There is no reason why the principal cannot keep himself up-to-date with an adequate system of controls. A sales executive, for example, might keep himself informed through a periodic report from each salesman on the dates of customer contacts, orders solicited, actual shipments, and credit standings.

Some critics maintain that the assistant position increases administrative costs. The addition of a new position will, of course, add one item of expense; but that position can actually reduce over-all expenses if it permits a greater span of control and thus reduces the total number of principal supervisors.

Others insist that the use of assistants reduces opportunity for advancement. But if the position is essential, it becomes a point of advancement as significant as that of the principal without an assistant. Thus, the line of promotion is merely lowered one level; and

further, there are two positions to which members can advance where formerly there had been only one.

The appointment of a full assistant, it is said, puts a "mortgage" on the principal's job, and his replacement becomes a foregone conclusion. But if the assistant is selected as a replacement and fails to develop as expected, there is nothing to prevent the selection of someone else to replace the principal. In many situations, the assistant should not be thought of as a replacement for the principal.

Assistants (particularly the personal assistant) may encroach on the prerogatives of others in the name of the principal. The assistant who "throws his weight around" can create consternation when others conclude that he speaks for the boss. Here again, the solution lies in administration. Clear definitions of responsibility and decisive administration can eliminate this difficulty.

Finally, there is the danger that personal assistants will be assigned jobs within the responsibility of someone else. Here too, clear definitions of responsibility can resolve most such misunderstandings. One criterion for determining when personal assistants are engaged in activities beyond their scope might be this: If the assistant must rely on someone else for the basic tools in executing an assignment, the job should have been assigned to the other person in the first place.

The Assistant Compounded

Recognizing that it may be necessary for someone to act in the absence of a principal, some organizations rotate secondary responsibility among a number of immediate subordinates as the occasion requires. At one time A will act for the supervisor and direct the affairs of his associates B and C; the next time, B will be designated to direct A and C; next, C will direct A and B; and so forth. This, it is argued, develops people by broadening their perspective and by providing opportunity to exercise managerial responsibilities.

The argument for rotational assignments is attractive; but when normal friendly rivalry

among coequal associates is coupled with the opportunity for one to exercise authority over another, a perilous strain is placed on human relationships. The part-time supervisor who directs his associates at irregular intervals is in a most unenviable position. Proponents of rotation usually advocate that all associates—particularly the associate whose segment is affected—concur in decisions made in the principal's absence. But if decisions are to be so made, what purpose does the alternate serve? If the principal is seldom absent, he needs no alternate; if absent often, a full assistant would be preferable.

The Assistant Misplaced

The existence of an assistant may reflect faulty administration. When top management refuses to permit other management levels to delegate, assistants are likely to increase. If each manager is expected to have immediate answers on all facets of his activity, for example, he will tend to assign the co-ordination of daily work to an assistant while he keeps abreast of operating details. When top management makes such unreasonable demands, there will be a tendency to repeat the practice at all levels. The solution to this problem should be obvious, and policies either for or against assistants will not change the situation. When managers are under such compulsion from top management, assistants will appear *in fact* even when not formally recognized.

An assistant may sometimes be used to cover up for a weak manager. The use of assistants in such situations can be justified on grounds of necessity, but it should be apparent that the best solution lies elsewhere.

Some organizations seem to use assistants as a symbol of status. The principal, given an assistant, presumably moves up a notch in the organization hierarchy. A cost-conscious management would find it hard to justify such practice, and certainly could not tolerate it for long. The solution to this practice lies in the company's management philosophy.

There is certainly ample evidence that assistants can—and often do—confuse administrative responsibilities by insulating the prin-

cipal from his organization. Where the principal deliberately removes himself from the intricacies of his responsibility through dependence on an assistant, he is merely debilitating his own position. Likewise, where the principal relies on the assistant to avoid delegating greater responsibility to other subordinates, he is weakening the basic fabric of his organization.

Thus, while the assistant position may often improve administration, it may just as often weaken it. The decision as to when and when not to use an assistant will be greatly influenced by the personality of the principal, but the basic consideration should always be: Will the addition of an assistant contribute to the organization's effectiveness?

BALANCED RELATIONSHIP

The relationship between principal and assistant requires a delicate balance of personal adjustment as intricate for one as for the other. The assistant must adjust himself to the methods of the principal, but the principal must also take account of the assistant's condition. Thus the problem is not essentially different from any other supervisor-subordinate relationship. Fundamental to this relationship is the delegation and assumption of responsibilities. There are at least six steps in this process.

First, learning to rely on other people for judgments governing basic decisions. This realization that one is "at the mercy" of one's subordinates is a sobering and humbling experience. In short, the principal should discipline himself to the realization that he cannot control every act of each subordinate, and that others must act for him. The assistant, on the other hand, must realize his responsibility to the principal and execute the principal's responsibilities in accordance with his policies.

Second, determining what to delegate. Three types of situations arise here: (a) where policies are clearly established, subordinates should be free to act independently; (b) where policies are clearly established but where action may affect other segments of the

business or may lead to changes in policy, subordinates should be free to act but should keep the supervisor informed of action taken; (c) where no policies or precedents exist, subordinates should act as they know the principal would act, consulting him in advance or informing him of action taken.

Third, defining authority and responsibility. This entails the determination of all necessary activities, assigning responsibilities and authorities, and placing activities in a balanced relationship.

Fourth, stimulating performance through understanding and responsive leadership. In such an atmosphere the individual is accepted for what he is and is encouraged to the utmost use of his talents.

Fifth, encouraging completed assignments by leaving each individual to perform his assigned responsibilities according to his own methods. This also implies that the subordinate will not look to the principal for detailed instructions.

Sixth, appraising performance against established standards. Such appraisal serves three purposes: (a) to discover if objectives are being achieved; (b) to assure that standards are applied; and (c) to determine the adequacy of operating programs.

SELECTION

The selection of an assistant, as of any other employee, must take account of the position's requirements.

Qualifications for the assistant may be quite different from qualifications for the principal, and individuals suited for the one may not be suited to the other. For instance, an experienced professional man may be well suited for an "elder statesman" role but not at all for supervision.

On the other hand, it seems to be true that some men make better managers than assistants. Unfortunately, the qualities that might make a person a better manager may make him unacceptable as an assistant and thus close off a natural avenue to a principal position. For instance, if he typically exercises a

tendency to take the initiative while still an assistant, he may so entangle himself with others' prerogatives as to prejudice them against him as a manager.

In selecting assistants it may be necessary to look for aptitudes quite different from those required of the principal. Critical to this selection is the nature of the supervision required of the assistant, for supervisory qualifications will vary with the type of supervision entailed. Where subordinates' work must be closely directed, the supervisor should have knowledge of the task, preferably with some prior experience. This type of supervision may require close adherence to schedules and work standards. The most effective personality here may very well be the orderly and systematic person. In other cases, such as where performance requires the exercise of initiative or the generation of ideas, the supervisor's primary job may be to stimulate group effort through building loyalty to the supervisor and/or to the group, and through developing a creative environment. The most successful supervisor here would probably be the warm, outgoing, friendly personality. In still other cases, particularly at top management levels, the supervisor would exercise little supervision over specific tasks, would co-ordinate and balance the activities of major segments, and would integrate them into a company-wide effort. Building loyalty and stimulating performance would appear to be less critical at this level. The success of the supervisor here rests upon analytical, creative, and innovative patterns.

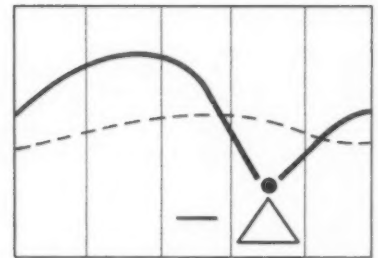
CONCLUSION

The use of assistants in business organization will depend upon the practices of top management, the nature of the activity, and the responsibilities of the unit. When founded on real need, the position of assistant can make a substantial contribution to efficient and economical operation. When not so employed, the position is an unjustifiable extravagance. It is for management to identify the conditions and determine the requirements of each individual case.

Outlook for

The Seaway to Mid-America

CONSULTATION



HARRY C. BROCKEL

*Municipal Port Director
City of Milwaukee*

JOHN L. HAZARD

*Professor of Transportation
Michigan State University*

ROWLAND BURNSTAN, SR.

*President
Borg-Warner International*

GERALD A. NEWMAN

*Consul General of Canada
Chicago, Illinois*

JOSEPH R. HARTLEY

*Assistant Professor of Transportation
Indiana University*

Consultation Editor, L. LESLIE WATERS

*Professor of Transportation and Business History
Indiana University*

with an additional statement by David L. Glickman, Economist, The Port of New York Authority

Now that we have the Seaway, will it be used? What are some of the consequences that can grow out of extensive use? Our five consultants represent diverse points of view. They have this much in common: All have devoted considerable thought to the Seaway, so that their combined opinions can lead to sound judgments.

■ What impact will the Seaway have on our nation's economy?

■ Are shippers taking full advantage of the new route?

ABOUT THE TIME that the printer releases the Spring, 1959, issue of *Business Horizons*, winter will relinquish its grip on the St. Lawrence Seaway. The construction period is over for most of the route, and vessels drawing up to 27 feet may now enter the Great Lakes from the high seas. Work remains on that portion north and west of Lake Erie, but even here commerce will not be restricted to the bottleneck of 14 feet; craft requiring 21 to 25 feet draft, depending upon the direction of the movement, may now pass through.

Authorization and construction of the Seaway has generated an enormous amount of publicity and controversy. But although the political and engineering feats are deserving of attention, the real objective of the project is yet to be achieved. The Seaway is, in effect, now ready to serve the purpose for which so many struggled for so long. Discussion began with an inquiry concerning the results of the first season of operation.

"In the normal course of events, I suppose we can anticipate some dissatisfaction with the first season of Seaway operation. There may be some mechanical bugs to be overcome in the operation of the new locks and in the training of new personnel. There may be occasional traffic congestion. The ports may be disappointed in the first season's volume of business, and I am certain that the ship lines will do some grumbling about port operations and facilities. These are all normal reactions to be expected."

Brockel

"Not too many difficulties are likely because, in terms of immediate development, I would assume that future traffic will be merely an extension of what is now going on. Most of the business is likely to be carried on by lakere; some of them will simply travel greater distances. Many of the ocean-going vessels will not go beyond the lower St. Lawrence."

Newman

Members of the panel seemed to agree that lake traffic will bulk much larger than foreign traffic. They were reminded that many of the changes will involve scale of operations rather than wholly new activities. As Burnstan stated:

Burnstan

"The Seaway will not be especially new to us because we have been using it for overseas movements for some time. Not long ago we moved an entire automotive transmission plant from Detroit. We took the factory out of operation while men were still working on some of the machines. The packers boxed machine tools as each one became available and deposited them on ships destined for Tilbury in the dock area of London. The machines were spotted rapidly in the new installation and put into operation immediately. This is why I think there will be no great change; overseas shipment is a phase that is already well-developed. However, the new Seaway could permit greater flexibility of operations because of the larger ships and organized service. I speak for only one company, but there are others that have had comparable experiences."

Hazard had a few qualifications:

Hazard

"To say that the Seaway involves merely the lakers' extending their operations and ocean vessels of certain capacities coming in discounts too heavily the adaptive ingenuity of the maritime industries and the fundamental changes set in motion by the Seaway. The Seaway will service a variety of existing vessels tailored for different trades and also a number of distinct vessels designed specifically for Seaway service. These vessels will include liners of five to six times the capacity of existing miniatures, lakers of ten times the capacity of existing canallers, intermediate ocean tramps that are more economical in some trades than domestic lakers of twice their capacities, and distinct hybrids (combining the attributes of lakers and ocean vessels) that are more economical in most bulk trades than any of the others. Undoubtedly, some time will be involved in the transition, but this will be much less than has commonly been supposed. Several hybrids have already been constructed of 15,500-ton capacity (13 times the average freight train payload), and some up to 19,000 tons that are both lake- and seaworthy are being designed in Europe. The Seaway-type vessels are not only large, but are economical and fairly easy to handle. Their introduction will bring about immediate as well as long-term fundamental changes in lake shipping."

Hartley

"Going back to what you said a while ago, Mr. Burnstan, it seems to me that you are looking at shipment on an unduly restricted basis. I will grant that you may have had low rates and satisfactory service because we have had fairly good operations from the small vessels that have plied our waters. Larger vessels can now serve our industries, and therefore the great merit of the Seaway, unless we have been sorely duped, is that it will offer considerable economies of scale in ship operation—which means lower rates per hundred pounds of cargo."

"We have had most satisfactory costs on movement, and I am not sure that we will do better after the Seaway is opened. We were able to negotiate with the shipping line. Conference rates may preclude this."

A general discussion followed regarding competition of tramps and the operation of rate conferences. There was agreement that the purpose of conferences was to stabilize rates, but that this was difficult to do. Members of the consultation also felt that the profits of companies participating in the cartels had not been inordinately high. Discussion then shifted to the priority of effects. Brockel began with a general statement.

"The initial impact, I think, will be strongest in the iron ore and grain trade since large volumes of these commodities will quickly adapt to the Seaway route. I would anticipate a strong impact on the coal and chemical industries. General cargo is so diversified that it is difficult to pick out any particular industry, but steel, automobiles, machinery, and capital goods industries will all be prominent users of the facility. Not only will wheat move in volume, but it should begin to move quite soon. This is because we are already moving much of the wheat on the lakes for ultimate transshipment at Montreal. It is also attributable to the fact that enterprises in the grain trade, including the government, have been planning for the Seaway for some time because the economies are obvious. We do have some storage problems. We would like to get all the grain far enough down the St. Lawrence so that there could be year-round service to Europe and elsewhere."

"The construction of elevators by Cargill downriver with a capacity of some 15 million bushels ought to facilitate year-round operations. Since some terminal elevators have an inventory turnover of 11 times a year relative to capacity, there will be an enormous potential for operations growing out of present and contemplated storage."

"One of the principal reasons why traffic in bulk commodities will adapt so quickly, apart from the fact that there is already a considerable movement, lies in the fact that the traffic is controlled by a limited number of enterprises. Five of our exporters move about 75 per cent of our total outbound movement in grain. It isn't splintered among 5,000 companies and dependent upon public port facilities and trade intermediaries. Even more vigorous control is exercised over the iron ore movement. Several companies in eastern Canada will move 12 to 15 million tons over their own railroads and in their own or chartered vessels to their own lake port facilities for use in their own furnaces. This is why one segment of traffic can adapt quickly while general cargo lags. Not only is there limited development of central wharf facilities, but there is also an absence of concerted developmental effort by

Burnstan

IMPACT ON CARGO MOVEMENT

Brockel

Hartley

Hazard

banks, chambers of commerce, trade associations, and various other mid-continent groups, including importers and exporters."

Conversation then shifted to general cargo and the difficult problem of massive orientation for export and import trade. The higher value of general cargo accounts for a lower ratio of transport charge (by any route) to value of the product. Possible transport savings, though large in the absolute sense, are small in the relative sense. But the situation is further complicated.

Burnstan

"Manufacturers have the additional problem of year-round shipment. They can't ship to the lower St. Lawrence and store their commodity for export until orders come in from overseas. Companies have specific orders and usually have a concentration point for export packing. This now has to be at a port served by road or rail and offering year-round service. It is going to take time and education to make traffic managers aware of both the problems and the possibilities. We have discussed this seasonal factor among manufacturing groups, and it always ends with the statement, 'We have to ship all year and on short notice.' Few manufacturers are now organized to use the lakes to any extent, and many of them have points of concentration for foreign shipment oriented toward the Atlantic coast. A lot of inertia exists, and it will take time for companies to become convinced that economies are great enough to justify moving the point of concentration."

Hartley

"In the long run, the seasonal factor will always be a serious restriction on the movement of general cargo goods. Nevertheless, I don't believe manufacturing firms will begin building storage warehouses to handle the problems of the winter months (as could be done for grain) because their European customers want to receive year-round supplies. The possibility does exist of storing the grain in the United States during the winter and letting Europe buy from the southern hemisphere. One of the most fruitful developments might be to alternate ports with the seasons if the savings due to the Seaway are sufficient. Manufacturers could shift to Atlantic outlets during the winter months. This arrangement should not be too complicated, although some extra costs might be involved for warehousing in situations where space has to be acquired for short periods of time rather than on an annual basis."

THE QUESTION OF TOLLS

Hazard was unwilling to accept unconditionally the problem of freezing during the winter months. He asserted that scientific advances may keep the channel open the year around. Attention now turned to the subject of tolls. Hartley began:

Hartley

"I have always doubted that tolls would ever be so high as to restrict seriously the flow of traffic. It wouldn't make good sense for the Seaway Development Corporation to charge tolls that stifle traffic; such action would sharply limit revenue. Annual operating costs will run somewhat below \$30 million. If there is a

volume between 30 and 50 million tons a year, the suggested tolls of \$.60 a ton for bulk materials and approximately \$1 a ton for packaged goods are not extremely high. I am thinking of the tolls in relation to rail and truck rates from the Midwest to the East Coast. Most of these range from \$15 to \$30 a ton, and I can't believe that a \$1 toll is so high that it would discourage total traffic very seriously. The tolls for grain are low in relation to transport savings via the Seaway except at the fringes of the lakes' trade territory, where it costs virtually the same to go to one of the other outlets in the United States. Railroads will make some vigorous selective rate reductions. These rate cuts by the railroads, in connection with the toll charges, might be of significance in some instances."

"Tolls have, of course, some restrictive effect on any type of traffic, but this will be much smaller than has been contemplated. On some short-distance movements (for example, shipments of asbestos, forestry products, and gypsum initiating along the shores of the St. Lawrence and destined for Toronto) and the packaged trade within Canada, their effect is heavier; on longer hauls of petroleum and coal, somewhat heavy (because of alternate market competition); on grain and even iron ore, unappreciable; on most general cargoes, of almost no consequence. On most commodities, tolls will constitute a modest part of transport cost and an almost infinitesimal part of the delivered price of the goods."

The chairman then inquired whether or not a differentiated toll structure might be developed to capture volume if expected traffic failed to materialize. Hazard agreed that this would certainly be true, but he went on to say

"A hard and long view of the project's potential leads me to assert that tolls and self-liquidation are the least of the problems. If you wanted to use the tolls effectively, you would use them selectively to control rather than to sponsor traffic, although this would raise the whole problem of discriminatory pricing. There has been an amazing reaction to the toll question on the part of various mid-continent interests. I interviewed approximately 500 different manufacturers and businessmen, including bank officials and others, during the fall of 1956. Over one-third asserted that the primary limiting factor on the use and success of the Seaway was the prospect that tolls would be prohibitive. I asked specifically, 'Do you think that tolls will be higher than at Panama?' Only four persons knew what tolls were assessed on the Panama, and they did not know the basis for charges (against vessel space rather than cargo). There is much unnecessary misapprehension on this subject."

Hartley offered an explanation for this misapprehension:

"Part of the dismal view taken on tolls is, I think, a result of the propagandizing by opponents of the Seaway project during the last ten years. Maybe they have convinced the public more than

Hazard

Hazard

Hartley

WILL THE PORTS
BE READY?

Newman

Brockel

Hazard

they realize—probably too much from the standpoint of the most effective use of this new transport asset.”

Members of the panel called attention to various proponents of the Seaway who had said years ago, “We will gladly assume our fair share of the burden,” and who have now made an about-face and asserted that the slightest tolls would jeopardize the entire undertaking. A discussion followed of the level of tolls in relation to the economies in scale that attend the use of larger vessels. Both Hazard and Hartley agreed that tolls were but one facet of cost and a low one at that. They felt that the success of the Seaway will by no means rise or fall on the expected level of tolls.

The varying states of preparedness of ports for the new trade next drew the attention of the discussants. Some cities seem to have done virtually nothing. Chicago has spent decades putting debris and garbage into Lake Calumet but now has a comprehensive improvement program for port development on the site.

“We in Canada look more at the Seaway as a medium for carrying bulk cargo. We don’t think quite so much about the potential for packaged freight. For the most part, we are ready. Montreal is investing some \$57 million for excellent channel and pier accommodations. Additions have been made to storage capacity. Toronto, Port Arthur, and other sites seem to be in a reasonably good state of readiness.”

“With the exception of the cities that have been named, plus my own home town of Milwaukee and a couple of others, there certainly has been an unfortunate lag in port preparation. There will be justifiable criticism from ship lines for several years concerning the dearth of general cargo facilities in lake ports.”

“The contrast in preparedness of cities in the two countries is very significant and reflects the differences in the approach to port development by the nations, as well as the initiative of individual cities and leaders. If I were to make a judgment as to the port best prepared for general cargo, it would probably be Toronto. They have had a Public Port Commission since 1913. It has been well received by the community, and the general cargo facilities are the best that I have seen on the lakes. Furthermore, the basis has been laid for expansion, the land is already acquired, and foundation improvements have been made. Additional terminal sheds can be constructed as needs arise. On a smaller scale, Hamilton has been equally impressive. By contrast, to my knowledge, not one new cargo terminal facility has been built in American ports from the St. Lawrence up to Detroit in the last eight years. These are the cities that will be reached first by the Seaway because it will be almost two years before the 27-foot channel is available north and west of Lake Erie. Chicago and Milwaukee are obviously moving ahead significantly. Duluth has a \$10-million program, and a private group is considering a far larger project that would

put the city in advance of any major one around the lakes. Duluth is not only a small city but one that has experienced limited general cargo movements.

"The contrast between port development in general in Canada and the United States reflects, among other things, differences in basic national policy. Downriver ports in Canada come under the National Harbors Board, which for all practical purposes owns and operates the ports. Uplake ports come under the Department of Transport, which has shared with the city port commissions the task of financing port plants. More recently in Port Arthur—Fort William and other lake ports, the Department of Transport has been considering providing the full capital financing. Their policy is now calculated to provide (whenever economically justified) an initial port and let the city make it a going concern thereafter. In the United States, port development has been left strictly to community initiative. The contrast is very simple: In Canada, ports belong to the hinterland or the nation; in the United States, they are locally owned."

"This brings us to the biggest problem of many of our U.S. ports—the development of an administrative framework within which to operate. Most of our port agencies have to represent either a single city or only a part of it, and in many cases they have not had the full support of the city. Our public administrations should be on a far broader basis. Even in Chicago where we have the Chicago Regional Port District, there is no genuinely regional port authority to assure rational development of terminal facilities to serve the far-flung business interests clustered around the southern end of Lake Michigan. We could learn a great deal in the Midwest about how to operate ports by studying the methods used in Eastern and Southern ports."

Discussion then turned to the consequences of uneven timing in port development. Detroit, for example, seems to be lagging far behind other cities, while plans and facilities are being developed either publicly or privately at Toledo, Saginaw, Muskegon, and rival areas. The question was raised whether or not this situation would orient trade to the cities that moved ahead and established channels in such a manner that if a lagging city should finally develop a program, it might get disappointing results. Burnstan replied first:

"I think the normal tendency will be to go toward the port that gives you service. Business will go wherever it can get the best deal. It feels no particular obligation to the railroads or trucks and therefore would shift if better arrangements could be made. Business, of course, wants service. It has been reluctant to support many harbor improvements primarily because it has thought of its role as a taxpayer. You've got to convince executives that the Seaway is economically sound and that the ports are individually self-supporting. There is a lot of 'wait and see' on the part of manufacturers in their attitude toward port development."

Hartley

Burnstan

Hazard

"Not much is going to happen if everybody decides to 'wait and see.' What is it that business is 'waiting to see'? Is the Seaway an active force in its own right? The answer to the often-asked question, 'What is the Seaway going to do for Podunk?' is 'Nothing.' There is a whole mythology developing about the Seaway—people expect it suddenly to shower upon their city and their businesses a bonanza of commerce from some place out of the hinterland or from another nation. This simply isn't going to happen. The Seaway is an outstanding facility, but it can be useful only to those who take the initiative and use it."

Hartley

"The remarkable thing about the Seaway is that, after all the publicity it has received in the last four years, little has developed in the way of active programs of business. When you talk to the average traffic manager and ask him his plans for using the Seaway, he doesn't have the faintest idea what he'll do with it."

THE WELLAND CANAL

The Welland Canal has been described as the serious limitation on the utilization of the Seaway. None of the panel members felt that this was either an intermediate or a long-term problem.

Newman

"Up to now, 22 million tons have been going through. The Seaway should increase this to 40 million tons. It would take at least 10 years to get up to the capacity of 60 million tons."

Brockel

"The developmental period gives the governments of the United States and Canada ample time to study and plan with respect to both Seaway lock capacity and the Welland Canal capacity. If the entire Seaway could be built in four years, additional lock capacity could be provided within two years, once appropriate decisions had been made."

Newman

"We are not very worried. After all, we spent \$132 million on the Welland in 1932, and Canada would certainly be willing to go ahead with an enlargement of the facilities if the need should develop."

Burnstan

"The Seaway has given industrial states around the lakes a tremendous insurance that they will get their raw materials. This is of fundamental importance to the economy of the United States."

"If this can be demonstrated, I would agree with you. I contend that since industrial products are now being shipped from the lakes during the shipping season, the Seaway cannot greatly improve this situation. So far as raw materials are concerned, I cannot agree that the Midwest stands in danger of being cut off, with the possible exception of iron ore. In educating the public we have concentrated too much on the magnitude of the project and too little on the economic results that would support the vast expenditure."

"Your remarks remind me of the widespread feeling in the United States that the Seaway is primarily a Canadian project. Some of this attitude represents an opinion widely held in Canada. Most of the locks are on the Canadian side, and the river has been, in effect, the Main Street of Canada."

"I don't think we should get involved in a discussion as to whose Seaway it is for it is inescapably and inevitably a joint Seaway by virtue of its geography, construction, and commerce. There is a much larger problem: What is the Seaway? It certainly should not be thought of as *The St. Lawrence Seaway* in a narrow sense, but rather as a *Great Lakes-St. Lawrence Seaway* serving a common mid-continent. It should be thought of as a whole region involving not only the river and the lakes but an extensive land territory tied to the lakes. Since the Great Lakes-St. Lawrence system is politically subdivided almost down the middle, it is inevitable that both countries would have to participate in the Seaway. Our products can't get anywhere without going through the Canadian Welland Canal, and Canadian wheat can't get to sea without using United States improvements in the Detroit River and 'Soo Canal.'"

"An overwhelming sense of mutual interest is certain to develop between Canada and the United States. This, in effect, creates an economic region in which the ties are too close to be split by a political line; in effect, we are moving into conditions for a common market such as exists in Europe. Much of the importance of the St. Lawrence Seaway lies in the stimulus to trade between the United States and Canada, or what I now prefer to term 'trade within a new region,' that is emerging."

The chairman raised the question about whether or not the addition of 8,000 miles of shore line would result in any significant shift in political attitudes. More companies in the state of Indiana are beginning to move into overseas markets and start actual manufacturing operations there. This has already begun to affect their relations with political leaders who represent the interests of all of the people in the constituencies. It was of some significance that no one in the group cared to venture very far out of business and economics and into the realm of politics. Mr. Burnstan did state that he thought attitudes had changed a great deal in the Midwest area in and around Chicago; parochialism seemingly had supplanted isolationism. There is not antipathy toward international affairs, but simply preoccupation with primarily local things.

Discussion continued on the adaptation of the territory contiguous to the lakes. Apparently, within the United States there will be a tendency south of the lakes toward a north-south orientation of traffic, in contrast to the east-west orientation that has prevailed in the past. Railroads such as the C & E and the Monon are going to be in a much better position than they were in comparison with some of the trunk lines with an east-west orientation. North-south branches of trunk lines, however, might switch from a feeder status over to a mainline status and have heavier capital appropriations. Hazard developed the idea further by commenting on the role of trucking.

Hazard

Newman

POLITICAL ATTITUDES

EFFECTS ON OTHER MEANS OF TRANSPORT

Hazard

"I was interested to learn that in Toronto, truck lines deliver 95 per cent of the traffic in general cargo. The advent of shorter distance movements suggests that trucks will move much of the general cargo to and from ports. Furthermore, to remain competitive, the railroads will be forced to adapt their facilities, rates, and service privileges to the changing conditions on the lake ports."

Hartley

"Farmers are certainly likely to move grain in their own trucks if the distance is short. There are many in Ohio, Indiana, and Illinois who are now driving up to 100 or 200 miles to deliver grain to elevators. What they are really doing is making some extra money as transporters of their own products. Furthermore, these distances might become greater for many agricultural movements made by carriers exempt from regulations. We know that Florida citrus concentrate is now being moved all the way to the state of Washington and that slaughtered lambs move from Oregon to New York. I see no exception here. Certainly there will also be a substantial movement by barge from the Mississippi River system up the Illinois River and through the Cal-Sag channel into the lower end of Lake Michigan. However, although there will be a great stimulus to this north-south movement, I still think that the vast bulk of U.S. economic effort is going to keep us on an east-west basis for a long time."

Brockel

"From my point of view in Wisconsin, I see more of an east-west orientation because the Seaway now means that goods that previously moved down the Mississippi and helped the Gulf will move East from ports from Chicago to Duluth. It all depends upon where you are sitting. The hinterland of the lakes will extend in all directions from the water's edge."

CANADIAN—U.S. RELATIONS

Newman

The principal result of the Seaway is going to be an expanding new regional economy with a vast volume of trade between Canada and the United States. This will wed the fortunes of the two nations and stimulate new overseas trade.

"Canada's main problem has been the tremendous imbalance of trade we've had with the United States. We bought manufactured goods from you, and in return we've been obliged to depend on a limited volume of raw or semifinished industrial material to arrive at a balance. We haven't always been successful. The opening of the Seaway promises an increased flow of our products, and this is welcome. We can see iron ore, newsprint, and other materials moving in much greater quantities. Access to raw materials from beyond the bounds of the Great Lakes assures the continued growth of Midwest industries. In this, we see expanding markets, not only for Canadian materials via the Seaway, but for products from other parts of Canada, such as timber from the Pacific Coast."

Hartley

"Most businessmen's attention has been devoted to new overseas sales. If these go up without a corresponding increase in purchases overseas, the imbalance of payments or acute dollar shortage will become even more severe. We will have to give the additional goods away unless we are willing to buy in return."

In contemplating the future of trade, the group called attention to the difference between the location of Canada's and the United States' industrial areas in relation to the Seaway. Canada obviously has much more industry at the end of Lake Michigan than at the end of Lake Superior. Furthermore, on the haul from Superior out to the sea, commodities have previously been able to take advantage of water transportation to a greater extent than have goods originating from the southern end of Lake Michigan. Land transportation has been very costly, so the savings are considerable.

Some attention was devoted to the use of roll-on-roll-off equipment, or "fishyback" as it is frequently called. Certainly there are substantial reductions in handling charges, and the results of the operation of sea-trains are relevant. Fishyback can operate fairly successfully between the United States and Canada, but there certainly is much doubt that it could operate between Europe and America. Their equipment, roads, and regulations differ too markedly to permit a significant interchange. Containers such as those now used by household movers offer much more promise for economies. Consideration shifted once more to imports.

"Although Americans tend to think of foreign trade in terms of sales opportunities, Seaway traffic during the last five years has shown a remarkable balance in tonnage between exports and imports. My belief is that it will be a more balanced trade route than many people think. Our trade ties with other parts of the world will develop in the following order: Europe, Africa, the Caribbean and South America, and the far East."

"Our own company engages in very little import activity, but I have noticed that people in the Chicago area talk a great deal about import possibilities. Professional importers and department stores are especially conscious of opportunities. Some of the stores have had special displays of imported goods in the last year or two, and they tie it all in with the Seaway. This is part of their idea of promotion. I think that foreign manufacturers are just as conscious of economies as we are, especially where they have to overcome tariffs. This could give some companies foreign competition that they never expected. Foreign automobiles are already moving into the United States by way of the limited Seaway, notwithstanding our tariffs."

"There is going to be some pressure for tariffs from selective industries. This pattern was well developed during the lengthy debate in 1958 on the extension of the Reciprocal Trade Act. A good case in point would be the recent demands of the lead and copper groups protesting imports and asking for higher tariffs. Since the Seaway will be primarily a raw material route, it may involve some sensitive areas."

IMPORT TRADE AND TARIFFS

Brockel

Burnstan

Brockel

Burnstan

"The opening of the European Common Market is going to enable some companies overseas to operate on larger and more economical scales. Necessary adaptations would be made in some of their products to satisfy the American market. Transportation economies should stimulate some of them to penetrate the United States. Their agents here are certainly interested in expanding distribution. A fair coming up in Chicago will give an indication of the array of manufactured items that will be available from overseas."

Mr. Burnstan was then asked whether or not the opening of the Seaway might prompt American firms to establish manufacturing units in Europe that would cater not only to the European market but make components to be brought back to the United States for final assembly and distribution here. Mr. Burnstan did not believe that overseas manufacture by American companies for shipment back to the United States was likely to expand very much, except for a few specialized industries making highly complicated machines. He reminded the group that many overseas operations of U.S. companies are conducted abroad solely to conform to various regulations of the countries. Generally speaking, he believed that manufacturing costs were substantially cheaper in the United States if runs of any size were possible. Newman agreed and pointed out several instances in which production costs were cheaper in the United States than in American branches of U.S. firms in Canada. This was attributable to economies of scale made possible by the large market. Hartley observed that it was an interesting irony that so many people conclude our production costs are high because our labor rates are high; whereas our labor rates are high because we can produce so cheaply—in prewar days, we exported rice to China and Japan and sold it profitably below their costs of production. Hazard replied:

Hazard

"This shows that trade is a many-faceted thing because we were exporting our low-grade rice and importing their high-grade rice. You see now that on the St. Lawrence route, we are exporting and importing automobiles, steel, and a host of other items."

LONG-TERM EFFECTS

Newman

Does the rise in lake ports mean the decline of Atlantic and Gulf ports?

"I encountered that question in New Orleans where there are certainly some reservations about the Seaway. I made the point that the Seaway insured that raw materials would continue to come into the United States, thus maintaining the current industrial development of the Midwest. Most of the goods sent out by Gulf and even Atlantic ports are manufactured items, and the assistance given by the Seaway to manufacturing provides a base for continued activity at Gulf and even Atlantic ports. Over a period of time, they will benefit rather than lose."

"Many persons concerned about the decline of Atlantic and Gulf ports have no concept of how small this problem is in relation to the broader question of regional growth and national gains. In assessing the Seaway, many have abstracted from the growth of the North American economies and subsequent changes in utilization of resources. Since the occasion of the first Seaway study in 1925, our trade has grown faster than our gross national product and may easily grow and change in composition just as significantly in the future. Two of the earlier Seaway studies (1928 and 1941), for instance, anticipated less traffic for the Seaway than moves at present through the antiquated St. Lawrence route.

"In Eastern Canada, the Seaway opens a new frontier and a whole array of materials options, such as iron ore, manganese, copper, lead, zinc, newsprint, and lumber. It is hard for me to calculate how any established port or railroad is going to suffer serious injury by the Seaway, since it is the new and growth traffic that is important and not those shipments that might be diverted from other carriers and ports. It is true that in the case of grain there is a very evident diversion. With coal, however, the element of diversion is small and, what is far more significant, a new group of coal mines in the United States will have a market in which to compete with oil from the Middle East.

"Unless we take a broader and more generous view of regional economic growth and development and its national consequences, we will not only Balkanize the North American economies, but we will permit sectional differences to throttle national initiative in these precarious times. The Seaway is not so much a build-up of the mid-continent at the expense of established regions' carriers and ports as it is a new addition to the growth and efficiency of both nations."

"I agree that we have thought of the volume of trade too much in a static sense, and that is why so many people feel that the Seaway involves merely the transfer of traffic from one facility to another. A careful analysis of the total situation suggests that a greater volume of goods to be shipped will result from the enlarged activity. It also suggests that, in view of the critical needs for some of the materials that are coming in, without the Seaway, the foregoing anticipated growth would be retarded."

Brockel more or less summarized the position of the group when he said:

"The increase in business and prestige of lake ports due to the Seaway will be fairly gradual and will extend over a period of years. Increased populations and higher standards of living will, in my opinion, generate new business for all ports and carriers to the degree that there will probably be a long and fairly painless period of adjustment, rather than about-shifts of large blocks of cargo. This is with the exception of grain, which was previously mentioned."

Hazard

Burnstan

Brockel

Hartley closed the discussion with the statement:

Hartley

"It is to be hoped that rivalries of ports and pinches of foreign competition, together with pressures for ship subsidies and similar influences, will not impede the economic effectiveness of this new facility. The opening of the St. Lawrence Seaway gives an opportunity for a great development of a vast area contiguous to the lakes. This expansion will be made possible by accessibility of new and distant markets and by the availability of raw materials that otherwise would have been in scarce supply. Large-scale shippers of raw materials seem ready for the Seaway, but many manufacturers are not. Our publicity has been devoted more to educating the public about how the Seaway was built rather than about how it can be used. Some years are sure to elapse before traffic managers will take full advantage of the new route. There is no single blueprint for all to follow. Proper policies for companies will depend on whether they are exporting or importing, the nature of the product, the seasonal factor, and a host of other elements. The sooner that adaptation is made to the facility, the better. Adjustment will be slow and, with the exception of grain, some substantial changes in the economy of Canada and the United States may be obscured by other economic forces of growth. In the end, the vast common market of the United States and Canada may be joined more closely than before, and the central North American economy will be tied much more intimately to Western Europe."

FOLLOWING the discussion, David L. Glickman, who attended the consultation but did not participate, commented on the points that had been raised. He later prepared this statement, which outlines some additional points and interpretations.

Glickman

The discussion of the differences between Canadian and United States policy with respect to port development was based upon a misunderstanding of the nature of national policy. Canadian policy is largely in the Western European tradition: Port development is regarded as a national responsibility. In the United States, on the other hand, there is no national policy with respect to port development. Instead, except for the provision of channels, port development is the responsibility of local, regional, and state agencies and private enterprise. Each major port seeks its own development without reference either to a comprehensive national plan of development or even to what competing ports may be doing. At times, even ports in the same area have no integrated planning, development, or promotion programs. Good illustrations are the Port of New York, Hampton Roads ports, and San Francisco Bay ports.

The discussion concerning the impact of the Seaway on the North Atlantic ports was oversimplified and not sufficiently appreciative of the very point that the speakers had made; namely, the effects of an expanding and growing economy. To illustrate my point, no intelligent businessman would suggest that his company should not

share in an expanding market, whatever its share might be. The same is true of ports and port administrators. They cannot view with equanimity the prospect of an expanding volume of trade in which they do not share, but which goes instead to other ports. Any evaluation of the impact of the Seaway on the North Atlantic ports must take this factor into account. The result is, then, that in addition to the volumes directly attributable to diversion, the volumes that would potentially move through the North Atlantic ports as a result of growth and expansion must also be measured.

The prospects of extensive industrial location resulting from the Seaway have perhaps been overemphasized. The Midwest area tributary to the Great Lakes—St. Lawrence route already has the greatest complex and variety of industrial facilities in the nation. Since this area is currently responsible for a substantial share of our exports of machinery and fabricated goods, it is not likely that additional facilities will be located there simply because the Seaway will be available for movement. The domestic market is far larger and will probably continue to be a more important factor in industrial location than the export markets. On the import side, however, there have been efforts—as all of the speakers were well aware—to have new types of industrial facilities developed to use imported raw materials for production; that is, sugar, coffee, cocoa beans, and so on. Many factors must, however, be taken into account before decisions concerning industrial location are finally made. These include comparative costs, marketing areas, sources of supply, and availability of year-round services.

Clarification is required with respect to the question of possible north-south reorientation of traffic movements. While this might be the case for some overseas movements as traffic over the Seaway develops, it is not likely to be the case for domestic movements between the Great Lakes and North Atlantic areas. As for the anticipated shift from rail to truck, this would depend on a group of inter-related factors affecting traffic movements in general; for example, composition of volume, distance, rates, and port facilities.

The discussion concerning the toll structure completely ignored the fact that the legislation making possible joint United States—Canadian participation in the construction and operation of the Seaway provides that the Seaway be self-sustaining and self-liquidating in current operating costs and capital investment respectively. The tolls assessed must be sufficient to meet at least these requirements. On this score, granting that the Special Tolls Committee has performed a commendable job, there are serious doubts as to whether the tolls that have been recommended will be sufficient. The proposed tolls are based on assumptions covering operating and maintenance costs that are believed to be too low (particularly since they are projected at a constant rate for 50 years), while some of the estimates of anticipated traffic are believed to be too high. And there is also the distinct possibility that the Welland Canal may have to be double-locked for its entire distance, with consequent increases in capital costs.

Top Management Takes a Second Look at *Electronic Data Processing*

AMERICAN INDUSTRY has been exposed to high-speed electronic data processing machines for more than a decade, and going to EDP has virtually become a fashion during the past four years. However, only recently has it been possible to take a dispassionate look at what the high-speed electronic computer means to the management of a business enterprise. Computers have continued to develop greater capacity and speed, and computer experts are giving even more exciting promises of improving the effectiveness of management. Company managements, fearful of losing both status and effectiveness in the competitive race, have ordered machines by the hundreds. What appeared a few years ago to be an investment too large for more than a handful of companies is now considered by company managements as a requirement equivalent to manufacturing space, headquarters office buildings, and district sales offices. In fact, *Business Week* has estimated that in mid-1958 over 1,200 companies, plus governmental agencies, had installed over 1,700 elec-

tronic computers; at least 3,000 additional machines are on order at prices ranging from \$300,000 to \$2 million per machine.¹

Yet, despite an interest by business in electronic data processing machines that must surprise even the most ardent computer enthusiast, there is evidence that many cooler heads in company management are beginning to wonder whether the benefits justify the expenditure of millions of dollars of capital funds and operating expenses. A large number of users of these machines have been disillusioned—one survey indicates that as many as 40 per cent of them have been disappointed.² As one major company president put it, he was glad that his company went into electronic data processing in a year when it had ample profits to absorb the underestimated high costs of a program that produced few of the glowingly promised benefits.

Whether a top manager decides to buy a computer, to wait, to use EDP service agencies on a time basis, or not to use electronic data processing at all, the importance of the investment required and the danger of losing competitive position or of becoming a second-class

Mr. Koontz is Chairman and Professor of Business Policy and Transportation of the Graduate School of Business Administration at UCLA.

¹ "Computers," *Business Week* (June 21, 1958), p. 70.

² "Computers," p. 70.

management citizen makes EDP one of the most provocative challenges of top management. The time is long past when basic EDP decisions could be entrusted entirely to enthusiastic staff specialists. Electronic data processing costs are very high, even for larger companies, and the ramifications are considerable: Top management itself must now take an active interest in EDP. This concern need not be about matters of electronic circuitry, machine language, or the mathematics of programming, but rather about the fundamentals of EDP from the standpoint of management itself.

WHAT IS EDP?

The most important feature of the electronic computing machine is, of course, its speed. Furthermore, great volumes of information may be conveniently stored and quickly retrieved, and immensely complex mathematical problems can be solved quickly. These factors allow electronic machines to undertake tasks never before practicable by less efficient machines. In addition, the nature of tasks programmed for machines is often such that something that once may have been prohibitively costly in terms of man-hour requirements is now economically feasible. One sees this, for example, in the quickly developed inventory control records that some companies get and in the analysis of transportation rates and services that high-speed computation is making possible.

Electronic data processing is, strictly speaking, more than a method of information processing. It is a kind of system that can get more complete information faster and more economically. But while EDP can do these things, there is no assurance that it will. Management must avoid both undue optimism and undue pessimism, and approach EDP from the standpoint of certain fundamentals.

Among the first questions that every top manager who intends to go into EDP should ask are:

Are we ready for EDP?

What can we expect EDP to do?

How can we avoid disillusionment?

What decisions must we make to get the most out of EDP?

Can we approach EDP step-by-step or must we start with an integrated system?

How can we be sure of making it pay?

What effect will it have on our personnel?

Can we use EDP effectively for decision-making?

Where should the EDP or operations analysis group report?

WHAT CAN EDP DO?

Even though electronic data processing machines cannot undertake tasks that require thinking and can only follow instructions dealing in a specified way with data fed into them, there are certain things that EDP can do well. These are the things that management has a right to expect of it. In a strict sense, they are the reasonable objectives of top management in approving capital and operating funds for installing EDP. Such tasks include:

- 1 The processing of information for better and faster management control
- 2 The closer integration of operations through tying interrelated activities more closely together
- 3 The mechanization of many pure procedures and the reduction of clerical work
- 4 Sharper decision-making through ability to consider more alternatives and analyze more complicated data relationships

Processing Management Information

The typical manager scanning the mass of reports he now receives in a business, governmental, or other enterprise may shudder at the thought of more information coming his way. But the complaint of managers in all echelons of enterprise is that the reports they get are neither tailored to their needs nor timely enough to be useful for purposes of control. While EDP can certainly speed up the preparation of management control reports, there is nothing in the electronic computer to assure that managers actually get the information they need to do their job. The machine cannot design reports.

However, if the *right* information can be designed for managers, then the electronic data processing machine can make that information available more quickly and usually more efficiently than other methods. Because of its capacity for filing data and for classifying them in many different ways without delay, EDP can hasten the day when the president, the vice-president in charge of production, and the traffic manager can all have the data they need. Also, because of speed in computation, EDP can assure not only fresh historical data but can assist in making quickly the many computations that are usually necessary to get detailed and timely short-term projections. Rather than receive historical data concerning what *has* happened, any manager really interested in control would prefer to have projections of what *will* happen—and in time to do something about deviations from plans before mistakes occur. But it must not be forgotten that, while electronic data processing makes all this possible, the machine can deliver only what it has been instructed to deliver.

Integrating Operations

It is sometimes not fully recognized that the proper use of electronic data processing machines allows the integration of many operations more thoroughly than is possible by standard methods. One of the problems that many companies face in their attempt to control inventories, for example, is the difficulty of relating them quickly and efficiently to a mass of variables and parameters such as working capital limitations, sales forecasts for individual territories, warehousing and shipping costs, production and distribution lead times, economical lot production quantities, shop loadings, and raw materials procurement. In this case, as well as with many other company problems, the proper answer often involves many data from many different sources, and the complications and correlations involved are extremely difficult. Without high-speed data handling, the task must be approached piecemeal. In addition, the com-

plexities of the task have often made control difficult as well as expensive. Many top managers have been frustrated by not knowing how to get proper co-ordination for control or by finding out that an inventory is out of balance weeks after the fact. Like so many areas of control, this is one where looking at history is of little help in solving the problem. Study might show why it *was* out of balance, but it will not necessarily keep it in balance currently.

The very fact that the electronic data processing machine can quickly locate, compute, and report huge masses of data involving many variables and parameters opens the way for integrating many business operations far better than ever before. This should make for superior planning and control.

Procedure Mechanization

One of the areas where EDP has been given great publicity is in clerical cost savings through the mechanization of procedures. A procedure is a true guide to action, defining the exact manner in which an activity must be accomplished; its essence is chronological sequence. A pure procedure leaves no room for decision-making, for thinking. It merely specifies definite actions. As such, most procedures can be placed on an electronic data processing machine.

For example, the preparation of a payroll is usually a matter of pure procedure because of the specific nature of the steps taken from the time cards to the writing of a check. Or a purchasing procedure may have no areas of discretion in it after such decisions as vendor selection, pricing, and delivery date have been established. Such procedures, formerly handled by clerical operations, can be placed on an electronic data processing machine.

But what has sometimes been overlooked is that EDP will not make procedures efficient. Indeed, in many instances, savings attributed to EDP are really savings brought about by the analysis and redrafting of procedures before putting them on a machine—savings that

could have been accomplished without the expenditure for the machine. In one study made for a company on handling payroll, it was discovered that all of the savings of the machine were really savings resulting from better procedures and that these could have been effected without the machine.

On the other hand, procedures analysis and control are usually given scant attention by top management, and procedures obsolescence is common in both large and small companies. Two of the reasons for this are the baffling complexity of procedures and the fact that most upper or top managers have neither the time nor the inclination to see that procedures represent the current "one best way." Another reason is that procedural changes often involve organizational or staffing changes, and these tend to be resented. Furthermore, people tend to oppose changes in procedures especially since procedures represent a kind of security for the person who does not want to take the responsibility for decision-making. For these and other reasons, procedures have become the inflexible red tape of organization life.

With the coming of EDP, procedures analysis and overhaul have become a must. In the first place, analysis and mapping of procedures are essential to mechanizing them; often merely taking these initial steps shows up obsolete, unnecessary, and inefficient work and paper flow. In the second place, the thought of putting into operation an expensive installation and the realization that working time on a computer is expensive have forced top managers to give this matter their attention. Complex procedures in many companies have been thoroughly overhauled just because top management has displayed an interest in the program. In one large defense company on the West Coast, the plan to install two of the largest computers at an investment of several millions of dollars and an annual operating cost of hundreds of thousands brought so much top-side influence into the program that savings from the improvement in procedures alone were estimated to exceed the cost of the EDP installation and its operation.

Since cumbersome and inefficient procedures may be due to poor organization, unclear authority delegation, and inadequate planning, one would expect the emphasis on procedures analysis generated by EDP to lead to removal of these deficiencies also. There is little evidence that this is so, but increased concentration on the procedures problem could lead to such far-reaching results.

Improving Decision-Making

Since World War II, operations researchers have preached the advantages of utilizing the decision model,³ mathematical techniques, and high-speed computation for improving decision-making and for developing better plans through more thorough analysis of available alternatives. There is no question that, through seeking out the relationships between the various variables and parameters in an effort to optimize the goals of business planning, and then representing this in a model, the planner is better able to see what his problem is. There is likewise no question but that, where variables and parameters can be quantified, the use of certain mathematical techniques can lead to faster and more accurate determination of results that are optimum in terms of goals. While careful managers have always looked at alternative courses of action and weighed their advantages and disadvantages in the light of such goals as profits, the techniques of operations research do open vistas for more thorough exploration of the effects of various alternatives.

One does not, of course, need a high-speed electronic computer to utilize operations research techniques. But where problems become complex, as most important planning problems do, the use of high-speed computation is clearly advantageous in solving problems quickly and efficiently.

Within the area of planning, the typical

³ That is, a representation of the problem in terms of the goals sought. For example, if the goal is to minimize costs, then a simple model might be a mathematical formula showing what inputs of labor, materials, and machine time would lead to lowest finished part costs.

business manager is often forced to make decisions without sufficiently complete and accurate analysis. Until the application of operations research and high-speed computation, many manufacturing companies could not be at all certain that their machine or shop loading was optimum in terms of profits, time, or other desired goals. Most companies with complex problems of warehousing and distribution do not know whether their methods of shipping and distribution are the best in terms of service requirements and low costs. Many companies introducing a new product or making a product change have to rely more than they would like on judgment or a limited exploration of alternatives. Indeed, on most business problems involving a decision for a future course of action, a manager seldom has enough information to be reasonably certain that he is making the right decision.

The greatest economies of EDP can almost certainly come through the assistance it can render in better decision-making. To date, there is little evidence that most companies have used electronic data processing machines for this purpose, beyond their occasional use for computing production schedules or making sales forecasts. One reason for this is that overenthusiastic operations researchers and other experts who do not appreciate the role of intangibles in many decisions have frightened responsible managers. Another reason is that managers responsible for decisions have feared to trust operations research and the machines. Finally, EDP experts, under pressure to justify expenditures for computers through demonstrated savings, have devoted their efforts to cutting clerical costs, rather than to improving decision-making. It is, indeed, difficult to prove that, through the use of the electronic computer, a decision would have been better by \$100,000 or \$1 million.

Yet, undoubtedly some of the most pronounced economies can come through sharper decision-making. In any medium- or large-sized company, a glimpse into the closet of past decisions will disclose mistakes that cost large sums of money. Many of these mistakes

might have been avoided by a better analysis of the alternatives available to the company managers.

CAUSES OF DISILLUSIONMENT

In view of the possibilities of electronic data processing, it is somewhat surprising that nearly half of the companies that have gone into EDP admit to some disillusionment concerning their installations. Although this disillusionment has not yet affected the enthusiasm of business and government agencies for EDP, and a tremendous backlog of these expensive electronic machines is on order, an increasing proportion of top management is looking more cautiously at the benefits promised by optimistic EDP staff experts. Since experience has disclosed some of the reasons for disappointment with EDP, future planning for installations should benefit from this experience.

The causes of disillusionment are not hard to find. Most of them can be reduced to the facts that costs of operation have been higher than anticipated, economies have been lower, delays have been encountered in installation (especially in developing programming), and, in some cases, the fear of automation has led to employee resistance. Admittedly, these causes of disillusionment are, in most instances, not due to the machines themselves (although machine down time has almost universally been underestimated), but rather to failure of human beings.

Higher costs have often resulted in an overestimation of the utilization of machines. Failures of the machine itself are partly at fault, but inadequate planning of the kind of data to be processed is the chief cause. If clerical operations are to be mechanized, one must be sure that these are clearly isolated and defined, because the machine has no "judgment" that will enable it to handle the exceptional (that is, unprogrammed) case. Moreover, some users have overlooked the balancing of machine work itself. It may be useless to be able to calculate payroll in a matter of minutes

if the sorting or printing task is a matter of hours.

Moreover, among the costs of EDP that have sometimes been overlooked is the expense of preparing data for the machine. The operation of the machine, while both costly and complex, may be far less so than the cost of programming and otherwise preparing data for the machine. The cost of operating the machine, for example, including rentals and operating staff, may be less than half the total cost of data processing. "One-shot" operations are very expensive since the cost of preparation may be half, or more, of the total costs. Management must be constantly aware of the fact that machines have an overhead of their own. With EDP, as with any high fixed cost operation, delays in gaining benefits have a way of increasing costs of output tremendously.

Perhaps the greatest source of present disillusionment with EDP is the area of estimated benefits. Savings attributed to machines are often due to factors independent of machines. There is an understandable tendency to assume that procedures will be streamlined when EDP is effected; but these savings *could* be accomplished without a machine. However, as pointed out earlier, many top managers have come to the conclusion that overhaul of procedures could not and would not be as effectively pursued without the challenge of EDP and its costs. In other cases, savings have resulted from improving the speed of information sorting, a savings that would merely require better sorting procedures and machine techniques, and not the cost of an entire electronic data processing machine system. In still other instances, machines have been used in such marginal operations as payroll or purchasing. In many companies, the machine itself has comparatively little to contribute to these tasks.

In most cases where costs have been higher and benefits lower than anticipated, the reasons fall into a few categories. Perhaps the analysis of machine use has not been as complete as it should be. Perhaps the feasibility study did not take into account the extent and

nature of procedures improvement that could be undertaken without the machine. Very likely, not enough time prior to delivery of the equipment has been spent in the development of plans for the use of the machine. Since the benefits of the machine are often indirect and indefinite, they are difficult to estimate. Most authors of studies determining the feasibility of EDP are understandably unable to answer such questions as the following:

- What is the value of earlier management control reports?
- What is the value of processing invoices more quickly?
- What is the value of better forecasts, and especially of forecasts that can quickly take into account changes in basic factors affecting the sales outlook?
- What is the value of better business decisions?

GETTING THE MOST FROM EDP

Unfortunately, top management must make decisions and follow through with effective action on a number of things other than the approval of the capital and operating expenses necessary for the installation of an electronic data processing machine. Although information for making these decisions must come from effective and intelligent staff work, there are certain basic areas where top or upper-level management decisions are required. Unlike so many facets of EDP, these are *management* problems and not primarily questions requiring expert knowledge of the machines and their use.

Integrated Versus Step-by-Step Approach

There are two basic ways of approaching EDP. The first method, referred to as the integrated approach, considers the enterprise operation as a complete system designed to accomplish certain goals. Organization units and procedures are merely devices to co-ordinate the actions of people in the attainment of these goals; therefore, EDP should be approached as

a part of a complete, integrated system. Such an approach involves the study of the total enterprise from the standpoint of information flows and the best ways by which electronic data processing, in all its applications, can assist the business.

The step-by-step approach, on the other hand, is based upon the practice of picking off tasks that electronic machines can do, such as payroll or inventory control, and then moving gradually toward a more complete system.

If the program is well conceived and executed, the integrated approach will undoubtedly give the business the advantages of EDP in a complete way. Furthermore, the manager who approaches EDP on an integrated basis will know best the kind of machine ultimately most applicable to his task. Often, a company will make a large investment in the installation of a machine and in the training of people to work with it, only to find in a year or two that the machine selected and the patterns of application adopted do not fit its operations. It is not easy to engineer a program, including both a machine and an organizational system, without knowing in advance the total job to be done.

Yet it can be argued persuasively that, if a company attempted to analyze its total operations as a system and engineer an EDP program to fit it, the time involved would postpone for too long many of the benefits of EDP. Four or five years appear to be a minimum time for the integrated approach—if, indeed, it is possible for anyone to know enough to undertake it at all. Programming is a difficult task and it is hard enough to program a portion of an operation, let alone the total operation of an enterprise. Moreover, there are certain practical problems to be met. Managers responsible for the investment of capital funds and the spending of new operating expenses involved in EDP are understandably anxious to show results of some kind as soon as possible. And managers properly fear an approach that may upset a whole structure of procedure and organization, especially since the electronic data processing experts have tended to oversell their

product, a product involving higher mathematics and complex electronics that few top managers can be expected to understand.

Neither approach provides the complete answer, but it is possible to combine the best features of each. Certainly, to the extent possible, analyses should be undertaken and plans made to develop EDP as a system. In space planning, few companies start out with all the buildings they will need for years to come; instead, they expand building by building, while keeping the master plan flexible. Electronic data processing may be handled in the same manner. The steps should be trimmed to the capabilities of the company and, for maximum efficiency, should be accompanied by organization and procedures planning. Not only can managers and personnel be sold on EDP by a building-block type of approach, but the state of the art of EDP is so tentative that top managers properly should be cautious in committing capital for too long a period in the future.

Review of Procedures

As was pointed out earlier, EDP cannot make procedures efficient, cannot assure that the right things will be reported, and cannot guarantee sound organization. Since these are touchy matters, concerning some of the most basic of human motivations—power and status—their study and overhaul requires strong and positive top management support plus diplomatic and patient analysis by procedures analysts. Neither of these is easy to achieve.

Most Advantageous Use of EDP

Every manager who recommends or approves the installation of EDP is anxious to make sure that it pays. Most managers want to see these promised benefits in dollar-and-cent estimates. As a result, feasibility studies are usually crammed with estimates of money that will be saved by installing EDP. This pressure may, however, lead to several weaknesses in

feasibility studies. One tendency is to underestimate costs and overestimate savings. Another is to emphasize the use of EDP in areas where definite savings can be projected, such as the processing of accounting data. Although it is hard to make quantifiable estimates of the value of better and quicker reports for managerial control and better analyses for managerial planning, less pressure on specific savings might lead to more attention to what might be the greatest benefit of all—better managerial planning and control.

In any feasibility study, top management should ask itself several questions:

- Have the intangible benefits of better information and decision-making been weighed?
- Have the savings due to the machine, versus those possible through overhaul of procedures, been separately identified?
- Has the time schedule for getting into operation been generously estimated?
- Have costs been adequately estimated, especially those costs during the transition period when both EDP and the old system must be used?
- Have we reckoned with the fact that we will probably process more data than before?
- Have we planned to use EDP for those tasks where it will give the most benefit, or do our plans involve digging a posthole with a steam shovel?
- Has the feasibility study outlined and weighed the disadvantages, dangers, or unexpected costs of EDP?

Without this kind of approach, managers may not only be deceived by the current enthusiasm for EDP, but the company may reap far less than optimum advantages. Just because EDP has a mathematical and machine language usually strange to those managers who must approve it, there is no reason why they should not look critically at the proposal.

EDP and Operations Research

One of the major disappointments experienced to date in business applications of EDP is the failure to use mathematical program-

ming and electronic data processing for the analysis of business planning problems. Although some companies, such as General Electric, have used EDP widely in developing production plans, most companies have hardly touched the surface in using EDP to analyze major planning problems through disclosure of a wide array of possible alternatives.

Operations research is still not used extensively for business decision-making; nor will it be until top managers insist on having some of their important planning problems at least exposed to operations research techniques. Even though all data needed are not quantifiable, it is surprising what a few approximations can do in making a problem area tolerably workable, if enough time is spent in communicating the parameters of the problem to a competent researcher. If a computer is available, it is especially advantageous to adopt operations research techniques because the high speed of the machine permits complicated calculations to be made easily.

In applying EDP to operations research applications, several factors must be kept in mind. Not all operations research problems require the use of costly electronic data machine time for their solution—the type of problem and its importance must be considered. Many can be handled by a slide rule and others by a statistician or clerk and a small calculator. Not all companies have the same type of opportunities for the use of EDP in operations research. Moreover, unless the problem is important enough to justify the cost of programming and operating the machine, one-time problems may not be worth the cost of EDP use. However, with recurrent problems, such as production or distribution planning or the development of sales forecasts, it is possible to undertake the expense of programming and then feed in variable inputs from time to time. Furthermore, for operations research applications, it is not always necessary for a company to have its own machine. These studies, which are seldom continuous and may need to be done only occasionally, can be handled on

rented time in the many electronic data service centers springing up in various parts of the country.

EDP and Personnel Problems

Whether a company goes step-by-step or takes the encompassing approach of an integrated system, there are important personnel problems involved in undertaking EDP. Among these are the resistance and fear people naturally have of automation since EDP does imply the automation of office procedures and statistical and clerical work. Another personnel problem is related to the changes in organization and procedures that usually accompany the installation of EDP. Still another difficulty arises from the fact that the larger electronic data processing systems require experts in processing and programming who ordinarily do not have the intimate knowledge and judgment concerning the business problems with which the machine is to deal; this problem of bridging the gap should not be underestimated. Companies have also experienced serious problems with the morale of programmers and systems experts working with EDP. Such experts, especially after the first excitement wears off, often do not see promising future career possibilities in this field.

The resistance to and fear of change can best be dealt with by ample publicity of the company's EDP program. Most companies have found that the time it takes to program work successfully is such that normal attrition in the clerical ranks takes care of those replaced. Other companies have found that the amount of additional information processed becomes so great that more people, rather than fewer, are needed, even though the need is usually for persons with training higher than that of the typical clerk. In this event, a training program to upgrade clerical employees not only makes them more useful to the company, but has a morale-boosting effect on the employee group as a whole. One large insurance company adopted a program including all the above considerations and was able to promise that no one would lose employment

because of the machine installation. The result was enthusiastic acceptance of the program by supervisors as well as by rank and file.

Changes in organization and procedures are not so easily dealt with, although much of the resistance to such changes disappears when people can be assured that they will not lose pay or prestige. Important deterrents to such resistance also include the publicity given to the program and management backing of the overhaul of organization and procedures. Moreover, in the present era of vigorous business competition, it is possible to instill in people a feeling of pride and security in a company that is progressing and improving efficiency. Many top managers make the mistake of assuming that people, even in the clerical ranks, have little interest in a company's success.

The difficulty experienced in bridging the gap between the mathematician or EDP expert and the experienced operators of the company is one not yet completely solved. Most companies have found the most successful device is to set up teams of the two types of people. Others not only do this but attempt to give both members of the team special training in the other's job. Thus, while neither is likely to become an expert in the other's field, it is possible for mathematicians and programmers to get an appreciation of the business problem and for the experienced business operator to get some understanding of the use and limitations of the machine. In addition to these methods, a small, but increasing, number of business schools are giving their students training in EDP as a part of the normal curriculum and are placing greater emphasis on mathematics. There is evidence that the gap between businessman and machine expert is being bridged faster than was thought possible a few years ago.

The problem of morale of programmers and systems experts is probably giving companies their greatest difficulty with EDP. Once an EDP program is installed, it can be operated with only a few key programmers

and a larger number of technicians with only slightly greater than average ability. One large company that became perhaps overly enthusiastic about EDP recruited a substantial number of top-grade college graduates and placed them in the program. Now that the program is fairly well under operation, this group is becoming dissatisfied with the challenge and opportunities offered by their jobs. There is every indication that this dissatisfaction may lead to disaffection unless steps to avoid it are taken.

Actually, this problem is not much different from those in any other aspect of organization life. In clerical operations, for example, one does not expect a group of ambitious and able young persons to be satisfied with staying in this area. Instead, the typical business moves them into more responsible and interesting jobs. The technical work in EDP is far more interesting and important than typical clerical operations and can justify a higher level of pay. However, no company should assume that, merely because EDP is relatively new and mysterious, promising careers for the able and ambitious (with the exception of a few top programmers), lie in this field.

Organizing the EDP Group

One of the areas where top management decision is required is the organizational location of the EDP function. Some zealous EDP experts, just as some overly enthusiastic promoters of operations research, have caused misgivings on the part of top management by insisting that these functions, being system-wide in nature, must report to the president.

This position does not appear to be justified by the facts. Electronic data processing is no more system-wide than are many other service departments such as purchasing, plant maintenance, or accounting. Indeed EDP is really an extension of machine accounting and calculation or mechanical data processing. Admittedly, it is more important and has more extensive ramifications. But the task of EDP is essentially one of serving the needs of

the company as a whole and, like other service departments, it should be placed where it can do the most effective service job.

If it were possible to have enough EDP installations, they should be placed under the managers who can make the best use of them. But since none but the very large companies can afford more than one EDP installation or programming group, the usual practice, and one that makes a great deal of sense, is to place the group under the company financial officer or controller. In this way, the group is closest to the usual source for most of the information to be processed, is in a department familiar with processing data, and is in the department that should be most familiar with serving the needs of company managers.

EDP and Decentralization

To solve its problems of size and to give a greater motivation to more people, companies have tended in recent years to decentralize authority by pushing it as far down in the organization structure as is feasible and economical and by developing relatively small integrated groups with definite profit responsibilities. Because EDP is an expensive and specialized operation, there is an understandable tendency for its activities to be centralized. Because EDP can process information so efficiently, there has also been a tendency to centralize much of the calculating and data handling work of production planning, sales forecasting, payroll, and other functions. Consequently, there has been much management concern that EDP will cause dangerous re-centralization of authority.

A major part of this concern arises from the confusion between centralization of *activities*—things to be done—and centralization of *authorities*—the power to make decisions. Centralization or decentralization of activities does not necessarily imply centralization or decentralization of authority. Except for some unavoidable centralization of authority over the methods of data processing, there seems to be

little reason why centralized EDP should impair the power of managers to make business decisions. If EDP operates to *serve* managers, as it should, and not to *control* managers, the effect upon decentralization of authority should be negligible. The marketing manager of a company will not lose control over the sales forecast just because the clerical and computing task is done by an EDP service department, so long as the persons who program the data take into account the variables and parameters established by the marketing manager.

Like any service department, the EDP group should be imbued with the idea that it is their function to serve. And top managers should be aware in this area, as in any other area where experts are required to undertake a staff or service task, that there is a danger that the specialist may veer from his true role and try to usurp the functions of duly authorized managers.

THE FUTURE AND EDP

This analysis of the problem of EDP from the point of view of the managers of an enterprise makes several things apparent. The electronic data machine does not mean automatized management, but it does place at the disposal of a company a powerful tool for effective management. Its possibilities in reducing clerical costs and in making clerical operations quicker and more accurate are considerable. But far more important than these are its possibilities for a better-informed management, for a better focus on manage-

ment problems, for better planning through better decision-making, and for better management control to make sure that plans are efficiently accomplished.

The focus of EDP on mathematical approaches has tended to bring into management more applications of the scientific methods of the physical sciences. Too many managers have erroneously believed that the variables and parameters of business problems cannot be expressed mathematically. Even though this is difficult in many business problem areas, and although there is good evidence that human relationships problems are more complex than nuclear fission and fusion, a surprising number of business problems *can* be scientifically analyzed. Moreover, even though many business problems that can be expressed by a mathematical model cannot be solved because of lack of available quantitative data, the mere statement of the problem opens avenues for developing data and for at least seeing the relative importance of the data not available in quantitative form.

Members of top management who would try to assure their position in the new competition cannot safely overlook the scientific contribution of high-speed data processing. But if EDP and its accompanying scientific approaches are to produce efficiency and managerial improvement rather than high costs and disillusionment, members of top management, while not trying to become experts in the field, can and should be aware of the nature and problems of this new development.

Mechanization is an agent, like water, fire, light. It is blind and without direction of its own. It must be canalized. Like the powers of nature, mechanization depends on man's capacity to make use of it and to protect himself against its inherent perils. . . . To control mechanization demands an unprecedented superiority over the instruments of production. It requires that everything be subordinated to human needs.

—Siegfried Giedion

MECHANIZATION TAKES COMMAND

A Marketing Analysis of Religion

JAMES W. CULLITON

Can businesslike methods improve the "sales" of religion?

RELIGION is being very poorly sold. The "market penetration" of all brands is low. Compared, for instance, with television—a much younger industry—its record is unexciting. Despite the fact that it has been on the market much longer, its percentage of market potential is substantially below that for television sets, and its rate of growth is far less than that of the husky newcomer.

Within the market for religion, too, there is a rather confused brand situation. The number of brands available is far greater than in most major industries and, while there are a few dominant brands, the pattern of market domination is quite different from that of other industries. For instance, the *Statistical Abstract* reports 81 different religious bodies with a membership of over 50,000; only 18 of these report more than 1 million members; 17 have between 1 million and 10 million; and one has 32 million members.¹

Mr. Culliton is Dean of the College of Commerce, University of Notre Dame.

NEW INTEREST IN RELIGION

It may seem brash and even sacrilegious to speak of religion as an industry, to discuss its market potential, market penetration, or brands and to apply to it other phrases from the jargon of business and Madison Avenue. Yet I do not mean it to be so. In recent years, there has been a growing interest among businessmen in the relationships—actual and potential—between business and religion.² This does not imply that all businessmen were previously antireligious, irreligious, or nonreligious. Many were interested in religion; many were active in church organizations and congregations; and many acted in business as religious men are expected to act. But by and

¹ U.S. Bureau of the Census, *Statistical Abstract of the United States: 1956* (77th ed.; Washington: U.S. Gov't Printing Office, 1956), pp. 52-53.

² By way of illustration see Henry M. Oliver, "Trends Toward a New Moral Philosophy for Business," *Business Horizons*, I (Spring, 1958), 33, and James C. Worthy, Vice-President, Sears Roebuck and Company, "Religion and Its Role in the World of Business," *The Journal of Business*, XXXI (October, 1958), 293.

Television Outstrips Churches in Growth

(In the United States at Selected Dates)

Date	Church Membership			Date	Ownership of Television Sets		
	Potential (Total population in millions)	Actual (Church members in millions)	Percentage of potential		Potential (Households in millions)	Actual (Sets in use in millions)	Percentage of potential
1926	117.4	54.6	47	1926	..	..	..
1940	132.1	64.5	49	1940	..	..	..
1950	151.7	86.8	57	1950	43.6	..	..
1951	..	..	..	1951	44.7	12.5	28
1952	..	..	..	1952	45.5	17.7	39
1954	162.4	97.5	60	1954	46.9	30.5	65
1955	..	..	..	1955	47.8	36.2	76
1958	..	..	..	1958	50.5	42.4	84

SOURCE: The population figures are from the U.S. Bureau of the Census, STATISTICAL ABSTRACT OF THE UNITED STATES: 1956 (77th ed.; Washington: U.S. Gov't Printing Office, 1956), p. 5. The numbers of actual church members are from the STATISTICAL ABSTRACT, 1956, p. 54. The percentage of potential is the author's computation. Data as of April for the number of households (1950 through 1955) are from the STATISTICAL ABSTRACT, 1956, p. 47. Data for the number of television sets in use are from the STATISTICAL ABSTRACT, 1956, p. 965. The percentage of potential is the author's computation. Data for 1958 are from the U. S. TELEVISION HOUSEHOLDS ESTIMATE BY STATE AND COUNTY (New York: Advertising Research Foundation, 1958).

NOTE: There are some obvious deficiencies in the data. Reported church membership may or may not indicate active acceptance of religion, and not all television sets are in homes. For instance, other data in the same STATISTICAL ABSTRACT (1955, p. 515; 1956, p. 838) indicate the following:

Date	Percentage of Homes with TV
June, 1955	67.2
January, 1956	76.0

The figures are somewhat lower but indicate the same trend.

large, any crossover between business and religion was on a strictly personal basis, and any relation between religion as such and business as such was ignored or, if not ignored, denied.

The new interest in the business-religion relationship is more in the philosophical order. Businessmen unashamedly examine such questions as, "What is the place of religion in business?" or, "Is there really any place at all for religion in business?" Despite the philosophical setting and the apparent objectivity of these questions, the results have not been so well-balanced as we might have expected. A kind of biased overtone seems to have developed in the actual discussions, and one gets the impression that any benefits that might come from an improved business-religion relationship would flow in one direction only—from religion to business. This might be summed up in the question, "What can religion do for business?"

At its worst, this smacks of smug righteousness on the part of proponents of religion and of unbecoming humility on the part of the businessman. Under any circumstances, it is a barrier to mutual understanding. The purpose of this article is to try to contribute to the development of mutual understanding by moving to the opposite extreme and asking the question, "What can business do for religion?"

As an educator primarily interested in business education, I have studied and observed the operation of business and am firmly convinced that the types of analysis businessmen make are basically sound and are applicable to many other fields, including religion. This is my first reason for recommending the methods of analysis that business uses. Second, there are certain parallels between the two fields that have been better captured in the language of business than of religion so that,

without implying the sacreligious and without implying that the concepts of business can be neatly transferred to religion, I am suggesting that a business approach to religion would be very revealing. Quite clearly, a business approach to religion could take a number of different tacks, and it would be impossible to cover all of them in one article, one book, or even one lifetime. For this reason (and because of my own interests in one particular phase of business analysis), my approach to this question has been limited to exploring some of the things that might be uncovered if we made a marketing analysis of religion.

Please note the last phrase, "marketing analysis." Up to this point, I have been speaking about "selling" religion principally because that is the term that most nonbusiness people use in their everyday conversation about business. But selling and marketing are not the same. Selling is part of marketing, but marketing is more inclusive—much more inclusive—than selling. The nature and the importance of this distinction should become clearer as we go on.

FIRST, FACTS ABOUT BUSINESS

Let us try to establish some common understanding of business as I am using the term. One of the key functions of business is making sales. Sales constitute the only source of dollars that can supply a business with the financial wherewithal to keep it alive. Investment capital furnishes some money but, without sales, the money soon runs out. For instance, the annual rate of expenditures by a typical American business exceeds the total book value of its assets. In other words, if the company tried to "live on its fat," that is, tried to maintain its established pattern of expenses using only its present assets, all the assets would be exhausted in less than one year.³ A business' only source of adequate money is its sales dollars. Borrowing may work for a while. But without sales income, a business soon dies.

But, making sales also has a much broader social significance than the internal health of

any one enterprise. The willingness of people to buy (and thereby create sales for a company) is the focal point of the democratic way of life. Being in any specific business is *not*, as some self-styled capitalists seem to assume, a God-given right. In the American scheme of things, being in business is a privilege that must be earned and constantly re-earned. It can be taken away at any time by the people, who merely have to refuse to buy, thereby refusing to furnish a business with the life blood of sales income.

Fundamental to the process whereby American businesses earn and re-earn the privilege of remaining in business is our belief in private property and its free use by its owner. We know that this so-called free use is limited by the corollary belief that such use should not impinge upon either the personal or property rights of others. We also know that determination of exactly where an owner's free use of his property does impinge upon the right of others is extremely difficult in many situations. To our credit in America, we do try to determine the limitations justly and equitably. We may not always succeed, but we try.

America has evolved a system that makes the attempt to establish such limitations more than ordinarily successful: the process of making sales. The American people grant to private property owners the privilege of using that property in making and distributing most of their economic wants (goods and services). Through the process of choosing what they will buy or will not buy, they keep a constant check on how well the property is being used for that purpose. If a company offers people what they want or can be persuaded that they want, sales will be generated. Then, depending upon the efficiency with which the company's internal affairs are run (that is, how

³ The annual report of the Eastman Kodak Company for 1957 (used just because it happens to be on my desk) shows expenses, including income taxes, of \$717 million and total assets valued at \$710 million. The company actually reports its net assets (that is, after deducting what it owes to others) as \$587 million, which would pay its wages and salaries (averaging over \$30 million per month) for a little more than a year and a half. Its sales income was \$798 million.

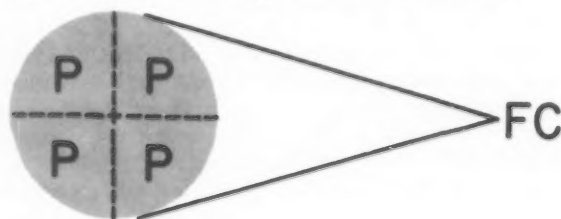
well it produces and sells the wanted goods or services at a cost enough below what people will pay to have something left over), the business will have profits, will prosper, and thereby will earn its right to continue.

If this does not happen, the business has two choices: either die or change the way in which it is using its property.

Two further facts about this process are significant:

- 1 These buyers or nonbuyers are America's free citizens. As a group, through their governments, they can also deny any group of private property owners the privilege of engaging in business. Power plants have been taken over by municipalities; the postal service is a government monopoly; we have TVA and other government-in-business projects. The free consumer determines the life and characteristics of individual businesses; the free citizen determines the life and character of business in general.
- 2 In either role—as consumers or as citizens—the people do not have to give reasons. They need only act.

While the application of these concepts to religion will be made more explicit later, it might be well to point out here that the "buying" or "nonbuying" of religion is basically a decision of these same free people. Forced acceptance of religion is just as degrading basically as the forced acceptance of specific goods and services. It is only by free choice that man can truly express his nature. Thus, those who would like more men to embrace religion or a particular brand of religion might be interested in how business goes about earning the free approval of enough people. Let us take a look, therefore, at the fundamentals in the marketing analysis process. Marketing management in business is essentially very simple; it can be diagrammed as follows:



In this diagram, the four *P*'s represent: Product, Price, Place, and Promotion; the *FC* represents the Free Consumer. Marketing management has only to get the right combination of those four *P*'s (sometimes called the marketing mix) in order to get enough consumers to say "yes" and thereby generate sales income. That's the essence of it. Learning how to do it takes time, but there are two characteristics that should be noted:

First, the whole process is dynamic. It is constantly changing, and measurement of the facts is not altogether possible. You must operate with rapidly changing facts, with some facts only vaguely known, and with others unknown and unknowable.

The effects of competition may be used to illustrate one aspect of the dynamic character of business. Many firms are seeking customer approval at the same time. The competition for customer approval involves not just one product against a similar product (such as one brand of tv against another) but rather the whole combination of *P*'s. A consumer's decision, therefore, rests not only upon what combination of *P*'s you offer him but upon an almost infinite number of combinations offered by an almost infinite number of would-be sellers, every one of whom (like you) is trying to adjust his marketing mix to the optimum combination. This alone makes the process dynamic at any given time. When these forces are seen against a background of the changes brought about by time, by technological developments, growing markets, and changing tastes, the picture is kaleidoscopic.

Second, the management of this dynamic, ever-changing enterprise is becoming more and more competitive as we learn more about the process. Better knowledge of the facts involved enables competent people to make improved decisions. And as some competent people begin to develop techniques for getting more helpful knowledge, they outstrip both incompetent people and other competent people with less helpful knowledge.

For instance, students of business and the

management of many companies are testing products, packages, displays, and the like, and undertaking fundamental research into human motivation. Reasoning suggests and results demonstrate that those managements that experiment to find the optimum marketing mix and that have greater understanding of the way in which people make their free choice are more successful in earning and re-earning their right to survive than those that do not.

The fact that business management acts in this fashion leads to one of the most important observations that can be made about it: It is research-minded. It tries very hard to get the most accurate knowledge about the consumer and his reaction to what the company is offering or is proposing to offer. At best, this is not just exploring market potential through statistical analysis, nor is it only product research; it is research into the *whole* process. The facts are used as the basis for setting standards or goals of good performance and also for measuring actual performance against the planned "good" performance. This second step is coming to be known as a marketing audit.

AN AUDIT OF RELIGION

To get back to the application of this type of marketing analysis to religion, let us address a few questions to those interested in the spread of religion. I like to think that this means not only the clergy but also laymen in various roles such as trustees, advisors, worshippers, and just plain men.

I implied earlier that the "sales" of religion are too low. Are they? The well-informed businessman would know whether his sales were too low. What is the market? What level of sales would constitute a satisfactory performance? By what means and how soon can it be achieved? Why should people buy? Why do those who buy actually do so, and why do others not buy?

I raise these questions principally to suggest that, so far as I can tell, very few people interested in selling religion are able to answer

them as accurately as the marketing manager can about his business. The sellers of religion have not set standards of satisfactory performance and have no well-defined sales goal; their only goal may be some percentage above last year—a norm that was discarded long ago by the real leaders in business.

What Would an Audit Reveal?

Even before an actual audit is undertaken, some comments are possible because, *first*, we are not totally ignorant of the situation and, *second*, one of the best ways of finding out which areas should be researched first is to make some observations on the basis of our present knowledge or opinions. It is in this vein, then, that I should like to make some observations of what I think might show up in a marketing audit of religion.

Product. Stated simply, is not eternal happiness, achieved through matching our actions against standards of right and wrong, the product offered by most religions?

Price. What price must our customers pay? Here I detect a wide variety of policies and practices among the various brands. Some take away almost all laughter and enjoyment; others may demand attendance at services; others offer specific lists of "Do's" and "Don'ts." I find a widespread belief among potential customers that the price of religion is the sacrifice of some other things they really want. This may be illustrated quite specifically in the field of business. There seems to be an acceptance of the idea that religion does not mix with business success, that one has to choose between the two.

Practical businessmen who would like to be religious have worked out two ways of living with this dilemma. The first is to lead a "simultaneous double life," one a part-time religious one (perhaps on Sundays, at charity appeals, and the like) and the other in business. This usually involves the necessity of persuading one's self that there is no inconsistency involved because "there *really* isn't any connection between the two." The second is to lead a "sequentially double life." The rationalization

goes something like this: Since it is quite clear that one cannot be a success in business while being religious and one cannot get to heaven *by* being a businessman, I shall achieve business success first and then, at some convenient time, repent (presumably of having been a businessman as well as of sins) in order to get into heaven. It would appear that neither of these ways is really satisfying to the persons themselves nor truly beneficial to the cause of religion.

If, in fact, one cannot get to heaven by being a businessman and therefore does have to choose between business success and eternal happiness, I can well understand why some people might think the price is high. If, on the other hand, one need not choose but can literally have "all this and heaven, too," the product is one of the most fantastically attractive ever conceived. In either case, I conclude that the promotion has been terrible; on the one hand, the potential customer has not been persuaded that what appears to be a high price is really not high in light of the benefits to be received (that is, eternal rather than a fading happiness) or, on the other hand, he has not realized the value of the product relative to a rather low price. In business, people sometimes erroneously associate high quality with high price and fail to recognize the actual high quality of some low-priced goods.

Promotion. The above observations on the promotional failures lead to a rather basic concept in successful marketing: The only really profitable sales are those that benefit both the buyer and the seller. In many circles, there seems to be the feeling that in business and trade generally the seller is "out to get" the customer (the *caveat emptor* theory). But, in fact, a large portion of American business is based on improving the welfare of both buyer and seller by the completion of a sale. The business community generally accepts this fact because of extensive evidence that no lasting business can be built without a good product.⁴ Putting it another way, no business that intends to earn and re-earn its right to existence can do so by foisting off a bad prod-

uct through the tricks of salesmanship. I make this observation knowing full well that quick profits can be and frequently are made by slick methods, that a large number of people are always trying it, and that we require police methods to control it.

These observations are made under the heading of promotion because it follows from them that the objective of good promotion is to inform and persuade the potential customer of the benefits he will receive from your good product. This puts upon a would-be seller the heavy burden of seeing to it that the product actually is well designed for the benefit of the consumer; that he knows what a customer wants or will want; and that he knows how to persuade the customer to pay the necessary price to fulfill the want. The basic rightness of the product and the understanding of why it is right are then, in every respect, the *sine qua non* of good promotion. Surely successful promotion will require knowledge of and skill in using the techniques of personal selling, communication, and advertising; but these are barren without the good product, the knowledge of why it is good, and of why the customer might think it is good.

These concepts also illustrate that the four *P*'s cannot, in practice, be separately treated. They are all interrelated. Thus, the first question with respect to promotion has to do with the product: Is it really well designed for the benefit of the consumer?

My observations suggest that religion's product designers and promoters have been in what McNair⁵ calls the "egocentric predicament," that is, designing a product as *they* thought it ought to be rather than for the

⁴ In this context, "good" and "bad" do not necessarily refer to standards of morality based on an ethical or religious scheme. Good and bad in the secular sense refer to how well the product fulfills the needs or desires of the consumer. A completely secular businessman—and I believe there are fewer of them than is commonly supposed—does not care whether those needs or desires of the consumer are morally good or bad. As a matter of fact, he need not even have an opinion about it.

⁵ "There is no more serious error that a marketer can make than to allow himself to be caught in the 'egocentric predicament.' In the realm of philosophy, from which the expression is borrowed, the egocentric predicament simply describes the basic situation in which each one of us

benefit of the free consumer and promoting it as if they were God himself rather than His agents and servants of God and man. At least one brand of religion seems to take delight in insisting that its product cannot be changed and that the free consumer must take it as is or not at all. Henry Ford too ran into some consumer resistance with his famous "Any color as long as it's black."

This is not to argue that the product can be completely subject to the whims of potential customers. Like material products, it must have basic integrity, but there is historic evidence that immutability of essential characteristics does not wholly remove the possibility of modifying some of the features. Perhaps a review of the product, clear definition of the absolutely immutable, and conscious effort to make it attractive to the customer would be profitable.

If we presume that the product is satisfactory or that it will be improved as a result of the marketing audit, we still have the problem of using the right promotional techniques. Here, I believe, there are several obvious weaknesses. I will indicate only a few merely to illustrate the kind of thing an audit might uncover.

1 The major portion of the promotional effort is centered upon those who are already customers. Certainly continual reselling to present customers is important, but to devote your major attention to and to design most of your material for this group is inadequate and inefficient.

2 The missionary activities of some brands of religion do not fall into the above categories, but I am not so sure that missionary work is done in the fields with the highest potential or with an adequate understanding of the potential customers' wants and motivations. There is ample evidence that the most productive missionary work is done by those who understand and appreciate

finds himself, namely, that he has to look at the world through his own eyes. In marketing, the implication of the phrase is that any seller who succumbs to the natural temptation to look at his problems solely from his own viewpoint and who does not make a conscious effort to overcome the natural limitations of his own outlook will indeed find himself in a predicament." From Malcolm P. McNair and Harry L. Hansen, *Problems in Marketing* (New York: McGraw-Hill Book Co., 1949), p. 66.

the customs, habits, and values of their potential converts.

3 A large part of the promotional material now used was designed for a type of customer no longer predominant. At a time when the nobility and the clergy constituted almost exclusively the educated classes, "preaching" may have been the most effective type of promotion. But in a society with a broad base of education, devoted to the freedom of individual choice with a fantastic exposure to words and pictures on every conceivable subject, possessing almost complete mobility and creating new dimensions of time and space, preachers are not only voices crying in the wilderness (without a PA system), but their messages are frequently anachronous.

4 There may also be too much secondary and not enough primary selling. Secondary selling means promoting individual brands; this is usually done by companies trying to sell their brands to customers who have already decided to buy a product rather than trying to sell the product itself.

The story is told, for instance, that after World War II when television was at the stage of becoming a commercial product, the leading company willingly shared its production know-how with many other companies. One of the basic considerations was the company's conviction that the more companies there were trying to sell TV sets, the more sets would be sold. It was willing to take its chances on getting a fair share of the larger market.

The go-to-church campaigns donated by the advertising industry are a kind of primary selling. Somewhat paradoxically perhaps, I do not feel that they are destined to be very effective. Primary selling has been most effective in America when it has been carried on by alert, hard-hitting competitive businesses individually rather than cooperatively. Cooperative industrial promotion is usually weak, average (in the sense that it has to be acceptable to all), and not infrequently has been a last resort of a declining industry. The vigorous industries are those made up of competitors who brag that they can take care of themselves. They try to sell more of their brand by helping to sell more of the total product, but

through their own efforts (being willing to see others benefit from their efforts) rather than by putting money in the pot for someone else to spend.

Place. The obvious place where religion has been offered is in a church building. In static, peasant, and immobile societies, the church building was frequently a focal point of community life. Clearly, this is no longer true to any great extent in many parts of America. To persist in activities that were designed when it was true is to demonstrate less wisdom than was possessed by those who designed them well for the conditions existing then.

Another and more significant way of looking at "place" is not in physical terms of buildings or locations but with the idea that the place for religion is in the lives of men. This is quite clearly the problem of the businessman that we discussed earlier: Is there a place for religion in the life of a businessman? Unless religion understands the lives that men lead—lives that their environment forces them to lead—it can hardly find a place in those lives except by accident. And there is much evidence that religion does not understand well either our modern industrial civilization or an atomic world.

This type of observation could be continued. But to extend it further would be as unwise as it is unnecessary. The observations were meant to illustrate the kind of thing a marketing audit of religion might shed light upon: They are *opinions* (even perhaps ego-centric ones) and my main thesis is that religion needs customer-oriented *facts* to answer these fundamental questions:

If religion offers man eternal happiness, why doesn't it sell at any price?

If in many cases religion can actually offer both temporal and eternal happiness, why hasn't it been a complete sellout?

If anyone intends to use the marketing audit technique in answering these questions, there is one final message they should carry with them: A good marketing man would never blame the customer in answering them. The reason is that a good marketing man has been so thoroughly convinced that he can continue to exist only through continued satisfactory service to the free consumer that all his thinking is oriented toward learning what the consumer wants, will want, or can be made to want. He sincerely believes: "If the consumer does not act the way I want him to, that is my fault, not his."

TWO THINGS fill the mind with ever-increasing wonder and awe, the more often and the more intensely the mind of thought is drawn to them: the starry heavens above me and the moral law within me.

—Immanuel Kant

Industry's Inexcusable Accident Toll

*Management's leadership is the major factor
in every safety success story*

ANYONE closely associated with the grim figures that count our industrial accident toll knows that this is a sobering experience. The accident problem continues to be appalling even though the need for its control commands generally recognized importance and consistently positive response.

As an officer of both a leather processing firm and the insurance company that carries our workmen's compensation coverage, I am perhaps more aware of the magnitude of the industrial accident problem than are some businessmen. As a sample, we can look at such shocking and inexcusable statistics as these:

Mr. Van Pelt is a director of the Employers Mutual Liability Insurance Co. of Wausau, Wisconsin and President of the Fred Rueping Leather Co., Fond du Lac, Wisconsin.

During an average workday, one worker is killed or crippled every 3 minutes, and one is injured every 11 seconds. At the end of an average workday, 62 workers have been killed, 350 workers have been crippled permanently, and 7,600 more have suffered injuries that will keep them off the job about 18 days.

At the end of each year, there have been about 16,000 fatalities, 91,000 permanent disabilities, approximately 2 million temporary disabilities, and a loss of nearly \$4 billion in wages, medical costs, and insurance.

These staggering figures tell only part of the story. Like the iceberg that shows only a fraction of its bulk above water, much of the expense of industrial accidents is hidden and noninsurable.

The numerous and varied estimates of annual cost of industrial accidents are usually based on medical expenses and lost time of the injured worker. While all of them measure losses in millions of dollars, the additional, so-called incidental, cost has been found by research to be four times as great. Expressed

another way, an employer's compensation payments amount to only one-fifth of his total accident cost.¹ Eventually he has to pay the whole bill.

The other side of the coin is obvious. While accidents are going to cut profits, the prevention of accidents can be decidedly profitable. The way to insure those profits is to make accident prevention an integral part of every job and give it the same management-level consideration that is given to quality control, production, and distribution.

Our firm now pays less than half the average tanning industry rate for compensation insurance. Effective safety controls, instituted a number of years ago, have helped immeasurably in making the company's over-all economic position more stable. Our best record to date is 1½ million man-hours without a single disabling injury. There is nothing miraculous about this; many firms are saving millions of dollars and an untold number of lives.

The answer to the accident problem is not always simple, and for every company the answer is somewhat different. In some plants, there is no organized safety program, no safety committee, and no specific safety director, but this doesn't necessarily indicate an unsound approach to accident prevention. On the other hand, some companies with safety committees, monthly safety meetings, and bustling promotional activities may be taking a decidedly unsound approach because they have neglected certain fundamentals in their excessive concentration on minor phases of accident prevention.

THE BASIC FUNDAMENTALS

Industrial accident prevention would be much easier if there were a standard approach to it with a clearly defined set of procedures, but such is not the case, and it never will be so long as industrial processes are carried on in such varied forms and situations. There are several basic ideas that should be observed if effective safety controls are to be established and main-

tained. Management can periodically review its activities and ask such questions as these:

- Are our accident control activities consistent with sound management procedures?
- Are they designed for our specific needs?
- Are they simple, economical, and consistent with the latest developments?

These questions are important because many accident prevention activities have only temporary value, and some activity that bears this label is a complete waste of time.

Accident and occupational disease prevention should be visualized as an integral part of the production process itself, not as a separate activity or program. It is an important management function that cannot be delegated solely to such outside specialists as insurance company safety engineers or state inspectors.

If this approach is followed consistently, a company's production heads and supervisory personnel will be as actively concerned with employee safety and occupational health as they are with quantity and quality production. Safety controls will be "built in" rather than "tacked on," and will be as permanently effective as other production controls.

WHERE TO START

Start at the very top: This may be a tired expression, but it is invariably true. Officials of many companies declare that active leadership by top-level management is the major factor in every industrial safety success story.

A good example of this premise is seen in the phenomenal safety record on the construction of the American side of the St. Lawrence Seaway. Because of the continuous interest taken in accident prevention by sponsoring contractors working closely with insurance company safety specialists, army engineers, and labor representatives, there were only three fatalities on this gigantic project. Some years ago, it was estimated that contractors could expect a loss of one life for every \$1 million of construction. The Seaway job, with costs estimated at nearly \$200 million, is probably the largest existing monument to respect

¹ H. W. Heinrich, *Industrial Accident Prevention* (3d ed.; New York: McGraw-Hill Book Co., 1950), p. 50.

for human life that has ever been erected. In contrast, a total of 1,544 men died in accidents during the construction of six other modern engineering marvels: The Empire State Building, the San Francisco—Oakland Bay Bridge, the Panama Canal, Hoover Dam, the Colorado River Aqueduct, and the Grand Coulee Dam.

Evaluation of Problems, Performance

Accident controls, like quantity and quality production controls, require certain records and measurements of performance. A good record system, used in relation to accepted standards, shows what is accomplished and what remains to be accomplished; without such a system, a sound approach to accident prevention is impossible.

In a case that points up a typical problem, the safety director of a large plant was so completely swamped with involved accident records that he neglected other phases of his work. A search for reasons for the company's inadequate safety performance disclosed the unusual amount of time the safety director spent on record-keeping. It also showed that much of the information being compiled was of questionable value, while some of it was completely useless, having no bearing on the plant's specific accident prevention problems. The company's safety performance showed immediate improvement when the record system was simplified and the safety director was able to give more time to more important functions.

Accident records need not be elaborate; a relatively simple system that shows essential details of the accident and, in every case, offers an explanation of why the accident happened, will provide the employer with all the useful information he needs. Periodic analysis and evaluation of records and performance can determine what corrective action or further controls are necessary.

Employee Selection and Placement

A vital but often overlooked factor is the careful selection and placement of employees, which is as basic in accident prevention as it

is in the efficient use of manpower. A worker's health, physical and mental abilities, and skills and experience are all factors in determining where he should be placed to perform a job safely and efficiently, without endangering himself or others. Both the worker and the job requirements should be thoroughly analyzed and the two wisely matched.

Preplacement examinations are an important means to wise placement and are particularly essential for certain types of work. Periodic examinations are a must where exposures to certain dusts, fumes, gases, and vapors are involved.

Training

No matter how much effort is put into the creation of a safe environment, much of the success or failure of established controls lies with the individual worker's knowledge, attitudes, and day-to-day work habits. Nothing is more basic than the integration of accident prevention with thorough job training. Both employees and supervisors must be trained in skills that promote consistent accident control. Training should not stop with the new worker; it must go on when an employee changes jobs or when part of his existing job is modified.

Some companies have a complete rule book on safety that is given to every new employee, regardless of his work assignment. As a result, the new man is confused as to specific safety instructions for his particular job. There are basic safety rules that apply to any job, of course, but safety training should mainly be administered by the employer's own personnel, as a part of job training.

Safety Education

Safety education should be regarded as a continuation of safety training. It must be well-planned and continuous to be effective. Educational devices should be designed to broaden safety knowledge, develop and maintain interest in accident prevention, and stimulate constant alertness for unsafe conditions and practices.

Educational activities and materials are most effective when employees and supervisors realize that management, not an outside agency, is predominantly concerned with communicating such information to them. Many firms rely almost entirely on a periodic safety meeting as their only medium of safety education, which may not be worth the effort, time, and money invested. One plant took a closer look at its monthly safety meetings, and decided that it was getting little true educational value from the some 1,000 man-hours it was devoting annually to this activity. The main danger of periodic meetings is that they grow dull, routine, and mechanical. Meetings, like any other educational device, must be built around specific purposes and must be directed toward definite problems or goals.

While good safety education is essential to a sound accident prevention program, its shortcomings can lead to rather subtle pitfalls. Educational efforts usually take the form of mass communication to groups of employees, and, of necessity, deal in generalities. The employee, well-motivated as he may be to good safety practices, hears lectures, views films, and studies graphic aids that generally teach the virtues of safety without telling him what, where, and how in regard to his job. This has been partly the fault of inadequate determination of accident causes, but it will always be a problem in safety education designed for heterogeneous groups because these must deal with general matters of interest to all. The solution is to include in every safety education effort a teaching plan to relate safety generalities to individual job tools and procedures. In most plants, the supervisor, because of close daily contact with the individual workers, becomes "the man for the job," and it is with him that a good part of the safety program stands or falls.

Supervisory Responsibility

One of the most important fundamentals in the creation of permanent safety controls is

the development in supervisory people of a keen sense of responsibility for maintaining safe conditions and practices. Management should clearly define and establish all necessary safety rules and practices, as it does with all other operating procedures. It is then the important responsibility of the supervisor, as management's direct representative, to see that established safe practices are enforced at all times. Helpful references are state safety codes and standards, and resources of local, state, or the national safety councils.

The importance of the supervisor in accident prevention is enhanced by his position as the person with the best opportunity for finding the direct and proximate facts concerning an accident. In most instances, he is the logical person to prepare the investigation report—the basic unit of all accident-cause data.

A company often finds that its supervisors have consciously or unconsciously formed the notion that accident prevention is the safety director's responsibility. "I let the safety director worry about that; my responsibility is getting out the work"—one manager found this to be a prevalent attitude among his supervisory people. Every supervisor in a plant should know that accident prevention is his responsibility; that it is a fundamental part of getting out the work. With this attitude in effect, it does not take long for a company's safety record to pick up.

Heinrich cites a rather extreme but interesting case that occurred in a hardware plant where the frequency of accidents from burrs and sharp edges while handling sheared material was alarmingly high. After all ordinary methods had failed as a remedy, the plant superintendent, at a safety committee meeting, emphatically stated that something was decidedly wrong, and, although he didn't know just what it was, he was going to put it squarely up to the foremen to produce results. He added that he did not propose to tell them how—that was their business and was one of the things they were paid for. Within a week,

one of the foremen came up with a new manufacturing method that improved the product, was decidedly cheaper, and definitely safer.²

Unfortunately, this approach can't be guaranteed, but it illustrates what can be accomplished by a well-motivated supervisory force.

Care of Injured Employees

If only practice could be made as perfect as theory, there would be no need for this provision; but, unfortunately, it seems that to err will always be human, and safety measures will always include first-aid sections.

Emergency care available in industry ranges from almost none to full hospital facilities. What is considered proper is, of course, a matter of relating facilities to special situations, which are affected by company size or type of industry. However, every establishment should meet certain common-sense minimum requirements. Many states offer minimum standards to guide employers, and, should there be any doubts, the following three steps can be used as a "rule of thumb" minimum.

- 1 A first-aid chest should be continuously maintained—complete and freshly stocked—in accordance with the requirements of the company physician or some other medical authority.
- 2 A trained first-aid attendant should be available during all working hours.
- 3 Hospital facilities should always be available.

Accident Investigation

An accident prevention program depends on thorough investigation of every accident that occurs. Eventually, the task involves fact-finding and reporting, and a most common weakness is to consider it a job that anyone can do and so assign it to unskilled people. In most cases—as has been stated—the ideal investigator is the supervisor in charge of the work area or function where the accident oc-

curred. Every supervisor should be trained in accident investigation and be fully aware of the importance of a careful, complete job. It isn't unreasonable to insist that every supervisor submit on every accident a report that includes a description of the accident; the time, place, persons injured, and nature of injury; the cause of the accident; and the facts relating to what was done or not done to prevent the accident.

To point out the importance of the complete investigation of "near-misses" as well as accidents, let me cite a brief accident report: "Occupation: sweeper. Injury: Tip of nose scratched by piece of emery wheel. No lost time."

It sounded like a very minor case, yet the safety engineer was puzzled and decided to look into it. He found that the sweep-up man had been near a grinder, cleaning up debris left by a small fire that had been brought under control by a foam-type extinguisher.

Why the fire? Because the maintenance man had tried to clean an electric motor with gasoline.

Why the nose-scratch? Because the emery wheel had exploded, and one fragment had grazed the sweeper's nose and whizzed on out the window, while another had slashed completely through a tool box.

Why hadn't the burst wheel been contained? Because the grinder was being used without a guard.

Why the explosion in the first place? Because the emery wheel, rated for 3,800 r.p.m., was used on a grinder adjusted for 18,000 r.p.m.

Why this series of errors? Because the grinder was being used by an inexperienced operator.

Investigation of this "minor incident" resulted in 25 recommendations for immediate attention.

Personal Protective Equipment

Certain hazards, of course, can be controlled completely only through the use of physical safeguards or personal protective equipment.

² *Industrial Accident Prevention*, p. 182.

It is important that all necessary safety equipment be obtained, and that it be adequate, installed correctly, and used properly and consistently.

Safety equipment manufacturers can inform employers, through their literature and their representatives, of available equipment, any standards that may apply, and the best methods of introducing, maintaining, and effectively using all safeguards and personal protective equipment.

Protective devices will always be an essential part of most safety programs, but it is well to remember that they merely guard a worker against some unsafe condition; they don't eliminate or improve the condition. A good working principle is to start by looking for ways to eliminate any and all hazards and to resort to personal protective devices only in cases where it is absolutely impossible to remove the hazard.

Technical Assistance

Accident control methods cannot be rigid and static, because accident problems are uncertain and ever-changing. New hazards often arise through changes in raw material, equipment, and processes. For such problems as these, a firm frequently finds itself in need of technical information on dangers and precautions.

A primary source of technical information is the compensation insurance carrier. He often publishes technical and semitechnical information for various types of industry and maintains libraries of technical references and periodical literature for loan to policyholders. His specialists in accident prevention, industrial hygiene, and health can offer valuable services on technical problems that arise, including claim investigation and defense.

The National Safety Council is a good source of information, as are state health and industrial hygiene departments, state safety codes, trade associations, equipment manufacturers and suppliers, the American Standards Association, and technical and advisory groups.

SAFETY MAINTENANCE

A continuous check on all conditions and work practices in the plant will detect new hazards and maintain established controls over existing hazards. Constant inspection can be carried out only through an alert and conscientious supervisory staff. This routine checking is effectively supplemented by special inspections by the employer's safety personnel, the insurance company safety engineer, and state inspectors. These supplementary inspections will help evaluate the controls that the employer has established. No plant can hope to maintain a constantly safe environment if it relies solely upon these periodic inspections, however. Some hazards can develop in a matter of days, hours, or minutes, so inspection must be a continuous affair by a company's supervisory people. Constant alertness is the only sure answer. When certain exposures are involved, expert inspection can be provided by other specialists.

Management must get into the act and stay in the act. Mere action is not enough; it must be sound action. If safety efforts are sporadic, overly concentrated on superficialities, or at odds with accepted management principles, no lasting results will be achieved. If management action is spread through areas such as those that have been defined, safety controls will become as fundamental and continuous as production itself.

Any enlightened employer can achieve effective safety controls with the basic resources already at his command. By utilizing the managerial and supervisory skills within his organization and by knowing and using the best sources of help available, he can maintain a safe and healthful work place.

This important goal can be obtained with no further governmental participation in industrial accident prevention, as is currently advocated in some quarters. Accident and occupational disease control is largely a matter of individual management; therefore, a company's over-all safety performance is one reliable way to appraise its managerial qualities and accomplishments.

The Business of *Schools of Business*

What constitutes an "education for business"?

Where does it begin—and end?

THE YOUNG MEN—and the occasional young women—who receive the degree of Master of Business Administration from our graduate schools of business today are usually about 25 years old. Most of them will be active in business until they are about 70; that will be in the year 2004, so we are training business leaders literally for the next millennium.

WHAT TO TEACH

What should we teach business leaders for the next millennium and for the remainder of this one? Although that question may seem unanswerable, let me point out that the faculties of schools of business give implicit answers every day when they prescribe curricula and determine the content of courses. Furthermore, the question is not unlike many questions that must be answered frequently in business itself. Recently, a friend told me of a

firm on the Pacific Coast that spends \$200,000 each year planting tiny trees that it expects to harvest in 75 years. As my friend commented, "That is not planning, that is faith."

Our problem in schools of business is actually somewhat simpler. Not only is our time span 30 years shorter, but also our materials are more versatile, more adaptable, more mobile; in short, less wooden.

What should we teach business leaders that will be valuable to them during the next 45 years? One of the first obstacles to answering this question is the fact that we do not know what businesses our students will practice. We can ask them, but even if they could tell us where they will start (and many cannot do even that), the fact is that there is a good deal of shifting of fields. They simply do not know what businesses they will be in 45 years from now, or, in most cases, even four or five years from now. One manifestation of this occupational mobility is the fact that in the Graduate School of Business of the University of Chicago approximately 15 per cent of the students hold engineering degrees and nearly 5 per cent

W. Allen Wallis, editor of the Journal of the American Statistical Association, is Dean of the Graduate School of Business at the University of Chicago.

hold law degrees. Shifts from one business to another are undoubtedly more common than shifts from one profession to another.

FOCUS ON FUTURE

Suppose, however, that we were to focus our attention for a moment on preparation for one particular business—banking, advertising, railroading, or hardware distribution—and ask the question, “What will the leaders in that business need to know in the next millennium?” If we know anything about the answer to this question, it is that nobody knows anything about the answer. Certainly we must expect more change in the next 45 years than there has been in the past 45. While some things have remained relatively stable, other things have changed unbelievably; and the things that have changed the most have been mainly the things that affect business the most. The stability is in what might be called the basic culture; that is, patterns of family life, the educational system, the governmental system, and ideas of religion, beauty, and the good life. Most of the changes have been in our material culture or in the specific activities carried on within the same basic institutional forms.

In 1914, automobiles were rare; airplanes were virtually unknown; a long-distance telephone call was an event; radio and television were not in existence; and electricity, by no means universally used for lighting, was used for little else. Our political institutions excluded women from voting; and none of the electorate was allowed to vote for United States senators. We had essentially no standing army and no alliances with foreign countries. Among our economic institutions, the Federal Reserve System and the federal income tax were brand new and as yet had had no impact. There was no social security system. The government debt was unimportant, and labor unions were negligible. In medicine, virtually none of the immunizations, surgical techniques, and drugs most commonly used today were even known. A startling statistic

is the infant mortality rate, which was ten times as high as it is now. Business was a much smaller part of the economy, business organizations were not nearly so large and complex, and management functions were much less specialized.

All of this makes it certain that the young men who receive degrees today from our schools of business certainly do not know any substantial fraction of the things they will need to know for successful business leadership during the next 45 years. If, when the millennium arrives, they *do* know the things needed for success, they will have learned them between now and then. In short, education for business cannot be thought of as a two-year master's program, or as a four-year bachelor's program, or as a three-year doctor's program, or even as a seven- or eight-year program covering all three degrees. Education for business must be thought of as a lifelong process.

LIFELONG LEARNING

One consequence of thinking of education for business as a lifelong process is that in planning the business school curriculum we should ask not, “What are the things that businessmen must know?” but, “Of all the things that businessmen should learn during their lives, which are best learned during the few years about the age of 20 to 25 that are devoted to academic professional training?”

The answer is clearly that academic business education should provide the best possible preparation for lifelong business education. This answer leads to two separate questions: *First*, what education in the early 20's will provide the best foundation for the succeeding 40 or 50 years of self-education? *Second*, what is the greatest comparative advantage of an academic institution over business itself in educating businessmen?

The answers to these two questions are, I think, very much the same. Universities should teach the broad underlying fields of knowledge that are basic to the practice of business,

and they should teach the fields of business practice in a broad, analytical framework rather than in terms of current or recent business practice.

Basic Disciplines

Let me comment first on the basic disciplines underlying the practice of business and then on the courses dealing with the practice of business itself. The basic disciplines may be classified under four headings:

- 1 economics
- 2 quantitative methods
- 3 behavioral science
- 4 law

Economics covers macro-economics, which deals with the price system, the monetary system, the allocation of resources, and other aspects of the economy as a whole; and micro-economics, which deals with pricing policies, the allocation of capital among competing uses, and similar questions that arise within an enterprise.

Quantitative methods comprises three main areas: accounting, statistics, and mathematics. Two kinds of accounting are involved: financial accounting, which accounts for money flows, evaluates the assets of the firm, and deals with other monetary matters; and managerial accounting, which produces the estimates of dollar costs or receipts from actual or proposed actions that are relevant to decisions among alternative actions. Statistics also has two aspects: statistical description, which organizes data and presents them in ways that are comprehensible and revealing; and statistical inference, which deals with the problems of drawing valid conclusions from limited data and of calculating the uncertainty or risk attaching to the conclusions. The mathematics to which I refer is not the old-fashioned business mathematics, which deals with compound interest, discounting, and so forth; but rather, modern business mathematics, which deals

with such matters as linear programming and inventory planning.

Behavioral science is a term that refers to those aspects of psychology, sociology, and anthropology that are primarily scientific in character and that deal with the behavior of individuals and groups. This field also includes some aspects of physiology, psychiatry, politics, and economics.

Law covers not only the law governing relations among individual firms, in its formal aspects as well as such informal aspects as negotiation and arbitration, but also the general area usually known as government regulation of business.

A great deal of the material in these four basic fields is directly applicable to many current business problems, and the fields should be taught with an abundance of concrete illustrations that not only elucidate the principles but also point up the applications. Direct applicability, however, is by no means the only, or even the principal, reason for including the basic disciplines in the curriculum. At least as important a reason is that it is certain that within the next few decades there will be many developments of real significance to businessmen in these fields. In the behavioral sciences, for example, there is so far only a limited amount of well-established knowledge pertinent to business management. Businessmen, however, will certainly be aided in learning from their own experience if they are acquainted with the problems, the methods, and the viewpoints of the behavioral sciences; furthermore, they will be able to profit in future decades from the fruits of research in the behavioral sciences now in progress or not yet even conceived of.

Functional Fields

The business subjects that are taught on the foundation of these basic disciplines should not be organized around advertising, banking,

railroads, wholesale grocery distribution, furniture manufacture, or other businesses. They should be organized around the functions that are common to all business yet are different in their analytical tools in the basic knowledge on which they draw. These functional fields may be grouped also into four categories:

- 1 production
- 2 marketing
- 3 finance
- 4 personnel

Production deals with principles of organizing and controlling the flow of materials on which work is being done. These principles are applicable not only to manufacturing but also to service industries, financial institutions, and all forms of productive activity.

Marketing includes such subjects as estimation of demand, adaptation of the product to the market, selection of channels of distribution, determination of prices, management of sales organizations, and measurement of marketing efficiency.

The field of *finance* covers the management of business funds, the operation of financial markets and the monetary and banking system, and methods of analyzing investments and choosing investment policies.

Personnel covers not only such matters as the selection, evaluation, and management of staffs, but also the area of industrial relations.

Somewhere toward the end of the curriculum, it is important to include a clinical or diagnostic course, in which emphasis is placed on the analysis of unstructured, realistic problems. This course should emphasize determining which principles apply and what they suggest, and reconciling conflicting prescriptions that may result from looking at a problem from different viewpoints. In short, the course should emphasize that the application of science is an art. A course in Business Policies or Business Organization can serve this purpose well, and it is here that the "case method" of instruction has a role.

LEARNING FROM EXPERIENCE

All of this emphasis on basic knowledge, theory, and analysis in no way implies that experience is one bit less important in the education of a businessman today than it always has been. Business experience, however, is best obtained in business itself, not in the classrooms of colleges and universities. Academic institutions can provide at best only pale and distorted reflections of actual business. To claim that the student will be trained at a school of business in the actual processes of decision-making is at best naïve or ignorant, and at worst, deceptive. Business itself is the only place to gain worth-while business experience. The schools of business can, however, prepare a student to get the maximum amount of educational value from his experience. The schools receive the students at a time of life when sensitizing and preparation for self-education can be most effective; furthermore, these are the parts of lifelong business education that the schools of business can provide most effectively.

EVIDENCE

As a sort of postscript, let me remark that my conclusions grow out of three kinds of evidence.

First, there are the basic facts and the inherent logic of the situation. This kind of evidence I have tried to sketch in presenting my views.

Second, there is the test of experience. The point of view that I have expressed toward business education is essentially the one that has prevailed at the University of Chicago's School of Business throughout its 61-year history (although the actual courses and curricula reflecting that view have changed considerably for a number of reasons, among them the development of new knowledge, the shift to graduate education exclusively, and changes in business, government, and technology). It is a point of view for which there is increasing support in the field of business

education and among thoughtful businessmen interested in education for business.

Third, there is the fact that the same pattern I have discussed for business education has evolved in all fields of professional education. In the history of medical education, of legal education, of engineering education, or of education for any profession, there appears a strikingly similar pattern: an evolution from the teaching of current practice toward the teaching of underlying sciences; an evolution from the organization of materials around common practical situations to their organization around common intellectual content.

For instance, in medical education throughout all of western Europe except the Germanic countries, teaching in the nineteenth century was done by practitioners in hospitals through a system of apprenticeship. Education consisted of the observation of the practice of medicine, together with discussion of that practice. This system was admirably adapted

to preventing new kinds of error, but it did not promote the discovery of new truths or a profound and growing understanding of health, disease, and therapy.

In the Germanic countries, on the other hand, medical education took place in universities through professors, and a thorough training in the preclinical sciences of physiology, anatomy, biochemistry, and pathology preceded introduction of the students into the clinics. An understanding of the preclinical sciences gave the students that broad general understanding of disease and therapy that would enable them to cope with new problems and discoveries. By the twentieth century, it was generally recognized that the Germanic system was far more effective in producing competent practitioners, and that system is followed today in all of the leading medical schools of Europe and America.

To summarize in a sentence: The business of schools of business is preparation for lifelong learning from experience.

THERE are two prejudices deeply rooted in the human breast which must be accounted for at the very threshold of the problem of business training. One is the prejudice against business as a calling or profession; the other is the prejudice against education. The prejudice against business as a pursuit has been fostered for untold ages by the traditions of the non-business classes, especially by the educated class. The prejudice against education, on the other hand, has been one of the most lively sentiments of the commercial community itself. The present movement in behalf of business training is making slow headway against the inertia of a great world-society bound together by hereditary ties, which in their inception and use were intended to resist educational progress. These prejudices, however, are doomed; they are dying, but they die hard.

—Charles Waldo Haskins

BUSINESS EDUCATION AND ACCOUNTANCY (1904)

FREE TRANSIT

a way out of traffic jams

THE PROBLEM of urban congestion has greatly increased in recent years, and there is little hope that conditions will improve. The population explosion of the last two decades vastly enlarges the dimensions of movement of people and their possessions. The impact of the change in birth rate is yet to be felt appreciably on the demand for automobiles. Those born in 1942 are just now qualifying for drivers' licenses, and a few years will elapse before a cumulative effect impinges on the demand for automobiles.

Furthermore, rising incomes enlarge car ownership. Some 67 million vehicles now swarm over our highways and byways; the ratio of vehicles to population stands just under 1 to 3. In wealthier states, it is even higher—in California, the ratio is 1 to 1.9. Here, there is more than one car to a household, and the percentage of families having two or more cars is rising. College students reflect the American or automobile way of life; the two-car student is emerging. The year when 100 million vehicles swarm our roads is not far distant.

Not much imagination is needed to visualize the impasse developing in spite of ambi-

tious national, state, and local efforts. Very few cities will be ready for a 50 per cent increase in the number of vehicles. If road facilities are utilized moderately, congestion seems to increase geometrically for a time as the car population rises arithmetically. Ultimately a standstill is reached. Of course, an increase in vehicles does not necessarily mean a corresponding increase in traffic. A bachelor who owns two cars is not likely to drive both at the same time.

COSTS OF TRAFFIC CONGESTION

Traffic congestion entails enormous costs, both measurable and immeasurable. These include such diverse items as extra wages of truck, taxi, and bus drivers, wear and tear on vehicle parts, bumped fenders, higher insurance premiums, and greater gasoline consumption. Persons who drive to work may have to start half an hour earlier and arrive at their office or bench with jangled nerves and with the bloom off their productivity for the

Mr. Waters is Professor of Transportation and Business History at Indiana University.

day. The scramble home is time-consuming and vexatious. If eight hours for sleeping and eight for working are subtracted from a typical day, then only eight hours of free time remain, and meals make further inroads. An extra hour coping with traffic cuts heavily into the optional time of millions of our work force. How does one measure the cost? But why bother when it is known to be so great, whether quoted in money or in some unit of disutility.

A cost that weighs increasingly heavy upon our society is the cost in terms of deaths and injuries. Few inventions of man are as lethal as the automobile.

Another cost is the enormous investment in streets, roads, lights, signs, bridges, and related facilities to meet needs for movement. San Diego, for example, has a \$400 million plan. This seemingly large amount is for minimum needs only and is merely in line with programs of other cities. The new interstate and defense highway system initially called for \$27 billion. Almost one-half this amount was destined to be spent within cities on that portion of the 41,000 miles within the confines of the cities.

Finally, a host of costs are incurred (but in some cases reduced) by the shifts in population and industry growing out of an array of factors, one of which is traffic congestion. Downtown areas grow absolutely but lag in comparison to suburban centers. Many functions previously concentrated in city centers are now diffused in outlying areas. Property values in sections on the perimeter of the city center have declined in many locales.

This may represent progress rather than retrogression, since it has prompted the organization of groups to save the downtown area, to rejuvenate the blighted section around the center, and to formulate master plans for traffic flow.

CAUSES OF CONGESTION

The enormous increase in the number of vehicles and their concentration in metropolitan areas have already been mentioned. The space

for vehicles has been relatively limited because it has always been easier for our economy to spawn cars than places to put or use them. The volume of pedestrians further slows movement. At the present time, traffic impediments are so great in Manhattan that the average speed of taxicabs is less than that of marching troops. Cars have grown in size so that more space is required for driving and parking. Standardizing the work day has aggravated the congestion of rush hours. Many of our street facilities are more appropriate for a limited number of horses and wagons or buggies than for the present and prospective traffic.

SOLUTIONS FOR CONGESTION

Cures or attempts at cures for traffic congestion may be divided into four categories: (1) Increase the use of present street capacity; (2) Build more streets, expressways, and freeways; (3) Escape to the suburbs; (4) Stimulate mass transit.

Increase Present Capacity

The first category is in the sphere of the traffic engineer with his synchronized lights, one-way streets, improved signs, and other means. Prohibition of parking on streets increases the car-carrying capacity of streets, but also forces drivers to cover great distances in search of a parking lot with a vacancy.

Build More Highways

Street widening has been costly and in a sense self-defeating. Expressways from outlying areas to the core have enabled even more people to move to a ranch-style home on the fringes of the city. The best and most taxable houses now are beyond the revenue base of the city that has just built the new thoroughfare! Lower-income people take over the vacated city houses. The new traffic artery can now funnel more cars into the center, thereby creating even more need for parking. A new

scale of values for land use emerges. Increasing portions of downtown land must be assigned to parking, and as the process continues, essential qualities in the center of town deteriorate. Stores are no longer close to each other, although proximity of stores and services has long been the great merit of a downtown area. Multifloor parking lots are only a partial offset to the decreasing advantage of downtown areas.

This does not mean that cities should not widen existing streets or build new ones. Indeed, an enlarged but judicious program must be followed that takes full cognizance of the limitations of streets.

Escape to the Suburbs

A shift to the suburbs is a common solution. Many firms should be in the suburbs because there is no need for them to be in the center. Others can perform their services more efficiently by going to the people. The new order with the old city center surrounded by satellite shopping areas has much that is commendable; it is in keeping with changes in living desires and modern contrivances. Yet, during the transition, we should try to make municipal arrangements that serve the metropolitan people best in terms of costs of transport and ease of living. Some suburbs have grown so rapidly that their congestion begins to rival that of downtown.

Mass Transit as a Cure

To date, mass transit has not been as helpful as its potential permits. Cities have grown, but patronage of mass transit has declined. People simply have enough money for individual transportation and prefer it, regardless of moderate differences in cost. Patronage of streetcars and bus lines has declined generally. The rate of return for mass transit systems in 1959 will do well to average 1 per cent on a fair valuation of the assets of the remaining private companies. Transit gets municipalized, not because people prefer a bit of communism at the local level, but because no pri-

vate investor can get a positive return from the business.

Transit companies are plagued by the high costs of operating on congested streets. They raise their fares a bit to cover costs and contribute even more to the attrition of patronage. Net revenue continues to decline, so rates go up again. By the time transit fares get to \$.15 or more per ride, short-distance traffic is discouraged, and inequities on a distance basis are accentuated. This in turn leads to adoption of zones, which provide a measure of relief but not enough to yield adequate income to the transit company. Runs are cut in number and frequency so that the quality of service declines even more.

The load of transit companies tends to become more concentrated through standardization of working hours and the decline of the city center as an amusement area. Television keeps people at home, and they drive to the countryside for amusement rather than take a streetcar to a downtown theater. All sizes of cities have the same problem.

Perhaps those that suffer the most are the ones with a population under 100,000, in which transit has been discontinued completely—there are several hundred of these in the United States. Walking, driving, or taking a taxi are the only means of transportation available to the public. In extremely large cities of the East, there is some possibility that the transit companies or municipal operations may show better financial results because the urban congestion is so great that individuals reluctantly are having to admit that they cannot get around in their own vehicles. This stage, however, has not been reached in commuting service where profitable operations cannot be achieved in the foreseeable future. The poor showing of transit companies looks good only in comparison with the results of commuter service.

The case for mass transit is surprisingly strong. The private automobile in a large city is incredibly inefficient as a mover of people. It is bulky, costly to operate, and requires a disproportionate amount of street space for its operation. A typical city car contains only

about 1½ persons. The schedule below shows the capacity of a single traffic lane in passengers per hour by various modes of transport:

Autos on surface streets	1,575
Autos on elevated highways	2,625
Buses on surface streets	9,000
Streetcars on surface streets	13,500
Streetcars in subway	20,000
Local subway trains	40,000
Express subway trains	60,000

SOURCE: *How To Keep Your Community Going Places* (Schenectady: General Electric Co., n.d.), p. 12.

The differences in the table are rather conservative. A bus with a capacity of 50, including standees, can operate in essentially the same area as two automobiles, which together would normally have 3½ persons. The critical problem is how to get people to utilize mass transit. They cannot be forced, and the service is not good in many cases.

Some officials have suggested barring passenger vehicles from the downtown area. Citizens would drive to parking areas in outlying districts and board a mass transit car. The trouble with the idea is that many citizens simply do not want to do it, and such a program might hasten the movement away from the city center.

FREE TRANSIT AS A SOLUTION

A simple solution with some complex ramifications would be to institute free transit for everyone. Mass transit can provide far more intensive utilization of space than private automobiles. Although service would have to be improved substantially if people were to patronize even free transportation, this could be done. The idea is not wholly new and was considered some years ago in Paris. Downtown business groups have on occasions provided free transportation for shoppers during off-peak hours. Transit companies themselves have experimented from time to time with reduced rates at off-peak hours. Previous suggestions and discussions have, however, been limited in application and did not seem fruit-

ful. A critical review of all aspects of the problem of movement of people in cities gives impressive support to free transportation.

Mass transit facilities are six to forty times more efficient than automobiles. But people like to drive their cars and cannot be forced to take buses. However, if service were rapid, frequent, and free, the story would be different. People would travel all or part of the distance to and from work, shopping, and play, leaving their cars at home or diffusing parking over a broad area. Service would be fast because there would be fewer cars on the street and because passengers need not even walk by single file to pay their fares as they entered the bus or streetcar. The side of the vehicle could be opened for quick entrance and exit.

The idea is in the interests of economic efficiency on the assumption that a direct subsidy to the rider is not so bad as a larger subsidy to the place where he now rides in his car. Ownership of the transit arrangement could very well remain private and the financial arrangements be handled just like a garbage contract in some cities. If the idea sounds daring, this may be all to the good. We have tried all of the obvious cures for congestion and inefficient movement of peoples in metropolitan areas and have ended up with more distress than when we started. This may be the most effective answer proposed to date.

How Would the System Work?

The transit operation, whether municipal or private, would simply start transporting everyone for nothing—by bus, streetcar, subway, or whatever means of public conveyance is available. Changes in patronage might prompt a new mix of the form of carriage.

Operating costs of mass movement would not rise proportionate to the increase in travel because of offsetting economies. There would not be a second person on a bus or a streetcar because no one would be engaged in the collection of fares. This would expedite service to an amazing degree. The same size of fleet could be operated to provide faster service because of the greater speed. As patronage

swelled, an increased fleet would be needed, and this in turn would permit even greater speed because of the reduction in the number of private automobiles on the streets. If more people rode mass transit, some slight increase in revenue from advertising might accrue because the signs would be viewed by more persons.

Does This Mean Municipal Operation?

Free transit could be provided either by a municipal operation or by a private company. If private, there obviously would have to be some means developed for remunerating the company. The difficulties here, though substantial, would not be insuperable, and surely could be worked out. Arrangements could be made for competitive bidding on the basis of number of passengers, passenger miles, or some other unit. Perhaps a superior arrangement could be worked out to operate on a cost-plus basis. Various criteria could be developed for extension or curtailment of service to the mutual satisfaction of the city and the private company.

Scope of the Service

Free transit would be provided not only to and from the downtown area, but wherever the movement of people made for economies in mass movement as compared with individual movement. There is no reason why the service could not be available to outlying shopping areas within the city limits. The problem should of course be approached on a metropolitan basis rather than a city basis—although the obstacles to this in the political sphere are rather formidable.

SOME EFFECTS OF THE SYSTEM

A major contribution would be made to the problem of congestion. This arises from the greater efficiency of mass transit in hauling people and especially from the diffusion of parking within the whole metropolitan area away from the centers. Many people would leave their cars at home and travel to their

destination via mass transit. Others would drive as long as they encountered no congestion and then shift to free rapid service. This would diffuse parking from the heart of the city where space is extremely valuable to areas on the perimeter. As transit volume increased, feeder runs could be authorized that would contribute further to movement on a group rather than an individual basis.

Financial Aspects

Critics of this plan may promptly assail it as another subsidy. No one is more opposed to certain subsidies than I. But it is primarily *because* of opposition to subsidies that the plan has appeal. Subsidies can be reduced rather than increased by utilization of the plan. Unless some concerted plans for a more efficient and pleasant way to move people are developed, there will be nothing in the future of municipal finance more costly than providing streets and parking places for all those who will be driving.

It is hard to determine precisely the magnitude of the savings that could be brought about by free transit. In one city where an \$800 million street construction program is under way, the transit company grosses about \$20 million per annum. If the capital expansion program could be reduced by one-third because of the new system, the city would save enough to provide free transportation for more than twice the former volume for a decade. Free transit is not a complete substitute for capital expansion for streets; the new scheme would simply reduce the amount that would be required. The older the city and the more inadequate its existing facilities, the greater the merit of the proposal.

Some Obstacles

The scheme is a daring one—but it needs to be. We have been too restricted by lack of imagination in previous attempts to solve our problem of urban congestion. There is, of course, a question about whether or not agreement can be reached by all those necessarily involved in putting the system in operation. It

A 1923 View of Urban Traffic

IN THIS country, goods carriage has developed to a greater extent than passenger transport, whereas abroad, particularly in England, the reverse is the case. The motor vehicle lends itself admirably to the transportation of passengers, however, and probably would have been perfected to a greater extent in the United States, had it not been for the bad roads, the early development of the trolley line, and the widespread use of the privately owned motor car. The latter may be accounted the most important means for carrying passengers on highways, and its use is increasing beyond all expectations. . . .

The bus in city traffic presents less of an obstacle than does the trolley car; and in certain cases ordinances forbid the use of the latter, notably in London. The use of a tracked vehicle in crowded traffic which is moving at a high rate of speed is inherently a menace, and there is no solution as yet in sight, except its removal from congested districts.

Coordination must in the future be the keynote of the relationship between various forms of urban transportation, and it would appear that this objective could best be reached through some sort of government or municipal control. What form this control will take has not yet become apparent; but it may be assumed that since these systems exist for the benefit of the public the public should regulate them.

—Percival White

MOTOR TRANSPORTATION OF MERCHANDISE
AND PASSENGERS (1923)

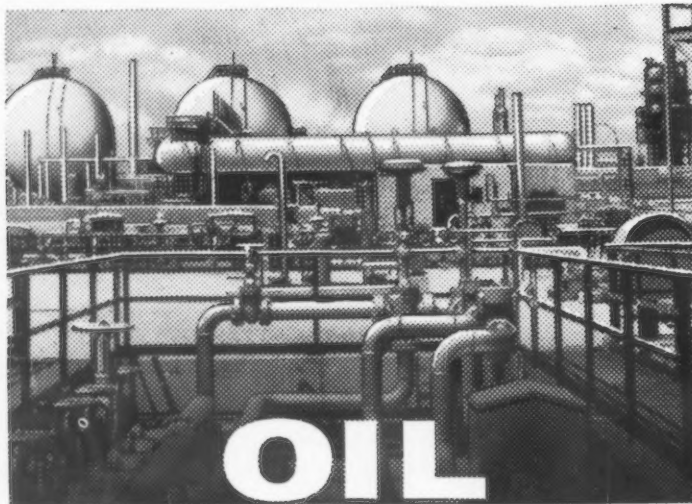
cannot be started on a limited or experimental basis; a review of all aspects suggests that pilot operations would not be very meaningful. Moreover, the final form would differ from one city to another. The stage we have now reached is the result of the evolution of many years of the automobile. We cannot expect to alter the situation much within a short period of time. Habits are too deep-seated. More important, much doubt exists that people are rational in the use of automobiles anyway. Even if service were superb in frequency and comfort, men might still prefer to drive. There is something unusually satisfying from a psychological point of view about sitting at a wheel and commanding several hundred horsepower. Experiments by transit lines have shown that improvement in service and reduction in fares have not resulted in impressive increases in patronage.

Today few drivers know the cost of operating a car and they might well resent having the information, even though driving may be two

or three times as expensive as transit. If free transit were available, they might be inclined to take it—much to their advantage and to that of the whole economy.

Even so, we cannot be absolutely sure of the success of free transit. Many years ago, Will Rogers declared: "America is the only nation that will go to the poorhouse in an automobile." Today he would observe that "America is the only nation in which a person would have a problem in going to the poorhouse. Which automobile would he drive?" Free transportation, however, might save his city from going to the poorhouse, and for the few in our affluent society who still must go, some might choose to leave their two cars at home and go by free, efficient, and comfortable mass transit.

The author is indebted to Mr. William Hughes of the University of British Columbia for his assistance in refining this plan for free mass transit.



OIL

THE PETROLEUM OUTLOOK FOR 1959

MAJOR STUDY OF INVESTMENT VALUES IN THIS BASIC INDUSTRY

The February Monthly Letter is a comprehensive study of the oil industry's current status and future outlook. Present indications point to an increase of about 25% in net earnings this year for the oil industry as a whole. Goodbody & Co. analysts have selected the stocks most likely to participate in this expected improvement.

THE OVER-ALL PICTURE

Crucial factors determining the prosperity of the industry—and selected individual stocks—are carefully examined. You'll find tables of petroleum demand, exports and imports for the last 10 years... inventory comparisons and wholesale price trends for oil products. Here are some of the questions which our new report answers:

"Will Demand Increase?"
"Are Inventories in Balance?"

"How Strong Are Prices?"
"What About Imports?"
"What Does the Venezuelan Situation Mean?"

8 STOCKS TO BUY

Our analysts recommend the stocks of 8 integrated companies, which, they believe, offer more value and sell at lower price-earnings ratios than many stocks of comparable quality in other industries.

OTHER STOCKS— CONTINUOUSLY REVIEWED

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Robert C. Turner
EDITOR

TECHNOLOGICAL HORIZONS

SEMICONDUCTORS

by Herbert Bandes

SEMICONDUCTORS are solids with very unique electrical and electro-optical properties as close to us as the nearest fluorescent lamp, television set, or photographic exposure meter. They are a product of modern science and have, in turn, significantly altered the course of modern science. We shall define them and explore their differences from metallic conductors. The rectifier, diode, transistor, photo-cell, solar battery, fluorescent lamp, and tv picture tube depend on semiconductors. Equally significant new applications of semiconductors lie ahead.

CLASSIFICATIONS

CLASSICALLY, there are three states of aggregation of matter: gaseous, liquid, and solid. During the past several hundred years, the latter group has been further split into electrical conductors and insulators.

To classify solids merely on the basis of how well they conduct electricity is to oversimplify physical reality. Metals conduct electrical currents very well. We can, in fact, define metallic conduction in the following manner:

1 The current, i , passing through a metallic conductor increases proportionately to increases in driving force (E) and decreases as the resistance (R) increases. In symbols, then, we have

$$i = E/R$$

that has been known for over a hundred years as Ohm's Law.

2 The resistance in a metallic conductor is the same whether the current flows from left to right or right to left.

3 The resistance of a metallic conductor increases as the temperature increases.

In the decade after 1874, many solids were observed that obeyed none of the foregoing criteria, yet were good conductors; that is, good in comparison with insulators. For instance, resistance decreases as the temperature is increased; the current from left to right differs by a factor as high as 50,000 from the current from right to left for the same voltage; and there is not a linear dependence of current on voltage. Therefore, Ohm's Law is broken.

These are not trivial matters. We have just defined a new state of aggregation of matter—the semiconducting state. The consequences, as we shall see, are quite startling.

TYPES OF DEVICES

SINCE 1931, when the term semiconductor was first coined, the properties of this state of aggregation have been fairly well explored, and new industries have been built on them. We can convert alternating current to direct current with semiconducting rectifiers; with proper treatment of the surface of the rectifier, we can directly convert sunlight to electrical energy.

The transistor, which is closely related to the rectifier, is the most glamorous of the present-day semiconducting devices. Phosphors, which convert electrical energy to visible light in our fluorescent lamp and tv picture tubes, also belong to this newly defined state of aggregation. With that background, let us explore aspects of the semiconductor industry, so that speculation as to future semiconductor devices and applications will have meaning.

Rectifiers and Diodes

The copper oxide and the selenium rectifiers, introduced com-

mercially in 1929 and in 1936, are largely obsolete. The silicon and germanium rectifiers that are capturing the market are far more efficient, much smaller, and can operate in hotter environments. The applications range from the 50-watt rectifiers used in television sets to the giant installations used to power the automobile industry's chrome-plating tanks. Diodes, their tiny brothers, are used by the millions in computers, television sets, and in literally hundreds of versions, in all manner of electronic equipment. In 1957, the combined silicon and germanium rectifier and diode industry sold 45,500,000 units worth \$48,500,000 at the factory. Diodes accounted for the bulk of sales. Fierce price competition will keep that segment of the industry from showing very great dollar gains in the years to come. However, we can expect an increase in the germanium and silicon rectifier business above its 1957 sales of well over \$1 million. This increase will be made at the expense of selenium and copper oxide rectifiers, gas-filled tubes, and rotating machinery.

Transistors

For a product that was completely unknown 11 years ago, the transistor, invented by the Bell Telephone Laboratories, has done remarkably well. Excluding the American Telephone and Telegraph Company, whose needs are filled by its manufacturing subsidiary, Western Electric, the industry in 1957 sold about 28,700,000 units valued at \$67,740,000 at the factory. Various forecasts of sales in 1965 have been made; a reasonable one would be about \$200 million. However, competition and automated production may drive the 1957 average price of \$2.43 to under \$1.00. As can be expected,

the major makers of radio receiving tubes produce transistors. In addition, many firms (such as Texas Instruments, Sperry Rand, Motorola, Clevite Corporation, General Transistor, and Hughes Aircraft) are also competing.

The features responsible for the rapid and widespread acceptance of the transistor are reliability, ruggedness, small size and weight, and independence from the hot, and therefore power-consuming, source of electrons required by the vacuum tube. Inherently, the transistor is a simpler device to manufacture than the vacuum tube. As standardization of physical dimensions and operating characteristics comes about through the efforts of industry-wide trade associations and military specifications, we can expect to see an increasing amount of automated production equipment.

As with diodes and rectifiers, transistors are made either from germanium or silicon. Basically, all transistors consist of three active elements: the emitter, which is analogous to the cathode of the vacuum tube; the collector, which is equivalent to the tube's plate; and the base, which serves as the grid and lies between the emitter and the collector. Very small electrical signals applied to the base act as a valve in controlling the flow of current between the emitter and the collector. When connected to appropriate electrical circuitry, the transistor can amplify weak signals, oscillate and generate high frequency signals of its own, and act as an electric switch. Therefore, the transistor can replace the vacuum tube if the requirements of temperature, frequency, and power-handling capabilities lie within its operating range. In the five or six years that transistors have been commercially available, well

over 500 types have been registered with the Electronics Industries Association.

The transistor has, in fact, replaced the vacuum tube in hearing aids and portable radios; in many types of electrical instruments, computers, industrial control equipment; and in a large array of military control, guidance, and communications equipment. Many vast new applications depend on extension of the operating characteristics and on cost reduction. Such applications include fully transistorized car radios and portable television sets, vehicle fuel injection and ignition systems to provide greater fuel economy, and automotive voltage regulators to permit battery charging at idling speeds.

Photo Cells

When light impinges on the surface of many semiconductors, either the electric resistance is altered (photoresistive cell) or a voltage is generated (photovoltaic cell). These two phenomena have found very widespread use, although the dollar volume is small compared with that of transistors or rectifiers and diodes.

Probably the largest unit sales are of photovoltaic cells used as photographic exposure meters. A rapidly expanding but still limited market is developing for the cell incorporated into the automatic aperture-adjusting mechanism of the modern amateur movie camera. Other applications are in scientific equipment, burglar alarm systems, automatic door-openers, and industrial counting mechanisms.

Another application of photovoltaic cells lies in the solar batteries that directly convert sunlight to electrical energy. The Bell Telephone Company is developing solar batteries for instal-

lation on rural telephone poles to charge conventional batteries used in some of their installations, and actual installations have been under test in Georgia for several years. The Semiconductor Division of Hoffman Electronics Corp. has, for several years, marketed silicon solar batteries that are being used by at least two manufacturers of fully transistorized portable radios.

The photoresistive cells are used in read-out systems for punched cards and tape, counters, scientific instruments, burglar alarms, and electronic headlight dimmers. One photodiode used for punched card or tape read-out is 0.077 of an inch in diameter, or about the diameter of a wooden match. Germanium, silicon, lead sulfide, and cadmium sulfide are materials used in photoresistive devices.

Miscellaneous Applications

Conductive Glass. Many metal oxides are semiconductors. One, tin oxide, can be deposited on glass in the form of a very thin transparent coating. This property is used to produce a non-fogging windshield for aircraft. The entire glass panel becomes warm when connected to a power supply, and condensation of moisture, causing fogged or iced windshields, is eliminated. Several of the large glass producers hold patents on proprietary processes for producing this so-called electrically conductive glass.

Surge Arresters. Still another family of semiconductors undergoes a very great reduction in resistance when high voltages are applied. These materials are used as lightning arresters in radio antennas and power lines.

Heating Elements. Since 1923, the Carborundum Company has been making industrial furnace heating elements, made of semi-

conducting silicon carbide. The feature of such elements is that they are chemically and mechanically stable at very high temperatures.

Thermistors. Thermistors are very useful circuit elements whose electrical resistance decreases as temperature increases. Normal electrical resistors undergo an increase of resistance as temperature increases, so that automatically self-compensating electrical circuits can be designed, using thermistors. Such circuits find wide application in some telephone and instrument circuitry where temperature-induced electrical instability cannot be tolerated. Westinghouse has recently announced a thermistor material whose resistance increases by many orders of magnitude over a relatively narrow temperature range. Such a thermistor could act as an automatic resetting switch to protect motors and other equipment from an undue temperature rise. Thus, if a motor overheats, the power to it would be interrupted automatically, and the motor would stop, to start again only after the internal temperature had fallen to a safe level. Presumably, here a material is used whose crystalline structure and resistance change abruptly over a narrow temperature range.

Phosphors

Materials for direct conversion of electromagnetic radiation to visible light, which include light itself, X rays, and cosmic rays, have literally revolutionized modern living. Both the television set and the fluorescent lamp use phosphors. Other applications include display tubes for radar sets, scintillation counters for nuclear and radioactivity research, physicians' fluoroscopes, and the military "sniperscopes" and "snooper-

scopes," which respond to body or engine heat (infrared light).

Electroluminescence. The most exciting application of phosphors, however, lies ahead in electroluminescence. In 1948, Georges Destriau of France observed that certain phosphors closely related to those used in tv picture tubes will glow when they are in an alternating electric field. Research at the laboratories of Sylvania, RCA, Westinghouse, and G.E. has resulted in great improvements in efficiency of such phosphors. The advantage, of course, lies in the fact that lamps only a quarter of an inch thick can and have been made. These lamps emit light quite uniformly over their entire surface; that is, are area sources in contrast to fluorescent lamps, which are line sources, and incandescent lamps, essentially point sources.

The electroluminescent lamps give shadowless lighting. As with conventional fluorescent lamps, a variety of colors is available. Unfortunately, the light output at normal line frequency and voltage is quite low, and they are not particularly useful for normal lighting when plugged into the living room wall outlet. For several years, however, Sylvania has marketed clock radios with panel-
escent clock dials that serve as night lights and at least one U.S. car maker has used panelescent instrument cluster lighting.

If a photoresistive cell is put in series with a panelescent lamp and the power supply, current will not flow and the lamp will remain dark. However, when the photoresistive element is illuminated, its resistance will decrease markedly and it will "switch on" the panelescent lamp. Even when the external illumination ceases, light from the panelescent lamp will keep the photoresistance low

and the lamp remains lit. In this manner, it is possible to amplify light. Variations of this approach have been made in devising electroluminescent radar and moving picture displays and computer read-out devices.

Further improvements in the performance of electroluminescent devices depend on a better theoretical understanding of the phenomenon and use of this understanding in developing improved phosphors.

Energy Converters

Direct conversion of thermal energy to electrical energy has been a possibility since a German physicist, Thomas Johann Seebeck, observed in 1822 that a current is produced in a closed conducting circuit of two dissimilar metals when the two junctions are at different temperatures. A French watchmaker, Jean C. A. Peltier, observed the inverse phenomenon 12 years later. He discovered that when a battery is connected across two dissimilar wires, the common junction is cooled or heated, depending on the direction of current flow.

Both the Peltier and the Seebeck effects have their origin in a common source and depend on some rather complicated properties of solids. Many semiconducting materials are more useful than metals both for Seebeck conversion and Peltier cooling. While the Seebeck effect has been used for many years as the basis of precise high temperature measurements, it has not, until very recently, been used in converting heat to electrical energy. Similarly, Peltier cooling has been possible only recently.

For several years, the Russians have powered radios by converting the thermal energy of kerosene lamps; they have also used Peltier cooling for certain air-

borne equipment and biological laboratory instruments.¹ In this country RCA, about five years ago, exhibited a small refrigerator that utilized Peltier cooling. In September, 1958, the Westinghouse Research Laboratories exhibited materials for Seebeck conversion of energy at 1100° centigrade. In January, the Minnesota Mining and Manufacturing Co. announced that thermoelectric generators with an operating efficiency of 6 per cent are being prepared for commercial delivery.

The key to commercial utilization, of both the Peltier and the Seebeck effects, lies in improved materials. However, with no known laws of nature standing in the way, it is quite certain that in the years to come, electronic refrigeration and almost noiseless air conditioning will be household items. Seebeck energy conversion will be useful in direct conversion of nuclear energy and for the conservation of some of the energy now thrown away through the exhausts of internal combustion engines. While it is hardly likely that Seebeck conversion will supplant conventional central power plants, it is very likely that it will be more efficient than small steam generator plants and may find wide use, in conjunction with fossil fuels, for small military, commercial, and standby household generators.

Xerography

A fairly well-known process of reproducing written documents is Xerography. A metal plate or drum is coated with selenium, which is then electrically

¹The November, 1958, issue of *Scientific American* carries a very interesting article by A. F. Joffe, a leading Russian physicist, that discusses these topics in an authoritative and readable fashion.

charged. When the surface is illuminated, the resistance path from the selenium surface to the underlying plate is greatly reduced. After exposure to a light source and a reflecting lens, the selenium surface retains a pattern of charges that is the mirror image of the original copy. A finely powdered insulating plastic is then spread over the surface and adheres to the charged portions. When an electrically charged piece of paper is placed in contact with the surface, the plastic powder is transferred to the page. The paper is now fed between heated rollers that fuse the powder to the paper, and the original is thus reproduced.

Very recently, the U.S. Signal Corps announced a variation of the Xerographic process developed jointly with Burroughs. The charging of the surface is done by a beam of electrons in a manner similar to the scanning of a television picture screen by the electron beam of the picture tube that literally writes the picture. Printing speeds of 3,000 words per minute have already been achieved; higher speed operation, with a theoretical limit of 500,000 w.p.m., is predicted.

Further development of this system has major implications to communications. Magazines and newspapers of national circulation could be printed simultaneously in several major distribution centers, with the text being sent electronically over leased lines by equipment in the composing room. Also, postal systems could be drastically revised.

THE FUTURE

EXISTING devices, such as transistors, diodes, and rectifiers, will be improved and will be used in a host of applications that will make living easier, cheaper, and

more comfortable. Some of the future applications of semiconductors, already referred to, may be large area panel fluorescent lighting, electronic refrigeration and air conditioning, and direct conversion of thermal and solar energy to electrical energy.

There are other less obvious and less spectacular developments ahead. The "Solid State Maser," whose heart is a semiconductor crystal, enhances the performance of radiotelescopes, whose information comes from radio waves emitted by the stars, rather than from stellar light. Such radiotelescopes are providing astronomical information that more conventional telescopes cannot provide. Quite possibly, the Maser will be useful in conjunction with television cameras mounted on satellites and for communication between the earth and space vehicles.

A whole new family of electronic components useful in the so-called parametric amplifiers is being developed in many laboratories. These components often depend on the properties of semiconductors. The great virtue of parametric amplifiers is that they are far freer of electrical noise than are conventional amplifiers.

The key to these developments lies in research. Primarily, a better understanding of the physical properties of materials is required; then a knowledge of how to synthesize materials frequently unknown in nature and in a purity far exceeding that found in naturally occurring materials must be obtained. Finally, the components must be designed and the equipment built.

The process is tedious and expensive; it is full of false starts and abandoned experiments. However, the semiconductor revolution does not lie ahead of us—we are in it now.

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HUMAN RELATIONS IN BUSINESS

By KEITH DAVIS, Arizona State University, Tempe. 576 pages, \$7.00

The first book to cover the full range of management's human relations activities and problems, presenting the fundamentals of employee relations. It discusses problems that occur when people work together in organized group effort. Though oriented toward business, the principles and ideas are just as applicable to government, education, or other work groups.

READINGS IN HUMAN RELATIONS

By KEITH DAVIS, Arizona State University, Tempe; and WILLIAM G. SCOTT, Georgia State College. *McGraw-Hill Management Series*. 473 pages, \$6.50

A particularly well-balanced collection of readings in human relations. The book contains 43 complete periodical articles and 20 additional short selections from articles and books. Articles are by leading authorities in human relations and represent many different research groups and points of view. (Paperback Edition \$4.95)

BUSINESS CONDITIONS ANALYSIS

By JOHN P. LEWIS, Indiana University. In Press.

Written by one of the most articulate young economists in the country, this book treats the applications of macroeconomic analysis to the diagnosis and prediction of domestic business conditions. Its main purpose is to impart a lively appreciation of the kinds of general economic analysis and forecasting practiced by "working economists" in business and government. Many points, arguments, and analyses are published for the first time.

INDUSTRIAL ADMINISTRATION: Concepts and Techniques

By STANLEY C. VANCE, Kent State University. Ready in April.

This book is the first in the field to emphasize the interrelationship of concepts and techniques pertinent to effective industrial administration. The first half of the book analyzes the basic management concepts integral to an understanding of the reasons for industrial organization. These concepts, laws, principles, and policies are the philosophical components concerned with the "why" underlying specific courses of action. The second half of the book describes some of the more important techniques requisite to the performance of vital management functions.

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Lois Shepherd Headings

EDITOR

book notes and reviews

"A good many things go around in the dark besides Santa Claus."

(Herbert Hoover)

SHOPPERS' GUIDE

ALL THE predictions of prosperity and plenty compose, of course, the happiest of spring songs for the business community. Despite all, however, recessions do have their solace: Tightening the company belt forces the executive to the old familiar essentials. There is no time nor money for frills. And prosperity does have the disturbing concomitant of the opportunity—even necessity—for innovation, which opens so many unfamiliar doors and trains of thought.

As every successful brainstormer knows, stoking the brain for storming is basic but time-consuming. There is an old adage about education that says it is not so much the knowing of a thing but the knowing that it is, and where to find out about it. The trouble today is that there is so much *more* to know about. Information specialists such as editors, teachers, and librarians are increasingly concerned about the staggering output of reading material. Their efforts are concentrating more and more on helping hew out paths through the forest and devising profitable shortcuts.

Several such paths and shortcuts are now available to the executive who is faced with the dilemma of learning more, faster. One reminder before we discuss a few of them: A guide is good only insofar as it is used as that. Some guides tend to oversell themselves as the whole story. (This reminder, by the way, is general and not intended as a cryptic indictment of any particular publication or publications mentioned.)

The most comprehensive guide exclusively for business periodical literature is the semimonthly *Current Contents*, now in its third year of publication. There are also, of course, the digest periodicals that cover both business books and magazines such as AMA's *Management Review*, Harvard's *The Executive*, Chicago's *Issues and Ideas*, and a newly announced commercial venture called *Executive Book Review* (this last will probably exclude magazine articles). Not to be overlooked here are the more general digest and reprint magazines like *Readers' Digest* and *Best Articles and Stories*. Then there are the book clubs, espe-

cially those for businessmen, such as the McGraw-Hill Business Book Club, Executive Books, Business Leaders' Book Club, Real Estate Books Institute, Sales Managers' Book Club, Salesman's Book Club, and the Tax Book Club, as well as more peripheral ones like the Basic Book Service, the Library of Science, Science Book Club, and Books Abridged.

Another serviceable guide to current literature in business and related fields that is sometimes overlooked by the nonacademic is the extensive book review section of the professional journal or learned review. This is particularly useful where unspecialized, as in *The Annals of the American Academy of Political and Social Science* and *The Yale Review*. Of these two, the *Annals*, partly because it carries individual reviews, is the more descriptive and less evaluative; the *Yale Review* publishes predominantly portmanteau reviews of two or more books and as a result features a comparative approach with a high degree of evaluation.

For a few more details on these various guides, *Current Contents*, published by Eugene Garfield Associates (who designate themselves as "information engineers") of 1523 Spring Garden Street, Philadelphia, covers over 120 publications in general business and management. The magazine, which comes out on the tenth and twenty-fifth of each month and costs \$25 for one year, consists of photographic reproductions of contents pages of the periodicals covered. Since many magazines run thumbnail abstracts or descriptive sentences under article titles, it provides a valuable survey of the field. The publisher also offers tailored editions upon order—that is, coverage of a selected group of peri-

modicals instead of the usual full coverage, which includes both journals and commercial publications like *Dun's Review*, *Printer's Ink*, and *Automation*.

Much scorn has been heaped upon the trend to "digests." A consensus prevails among the well-read that a thing is better not read at all than read in any abridged form. Ideally, this is so, for abstracts can distort and often are superficial imitations of substance. There is, however, a contrasting point not often considered: Some books and articles are better condensed. But perhaps the most valid justification is the one we began these notes with—conditions of time and energy sometimes force compromises. If it is possible to test the integrity and worth of a digest by comparing one abstract with its original, this should be done. In any case, the reader needs to constantly remind himself that some material is more adaptable to abridgment than other, that there is much of value in the original that is necessarily omitted, and that there is the intrusion of a third intelligence between his and the author's. Given all this, there is no doubt that the executive can by means of digests stretch himself over a much wider flow of information than if he were limited to what he could cover in all the originals represented.

Probably the best way to describe the coverage of the two comparatively new digest monthlies, *The Executive* and *Issues and Ideas*, is to list the complete contents of a sample issue of each. A recent issue of *The Executive* included digests of *The Affluent Society* by J. K. Galbraith, *The Learning Process for Managers* by Nathaniel Cantor, *Management Creeds and Philosophies* by Stewart Thompson,

What Management Can Do to Build a Favorable Climate for Company Growth by Robert E. Wilson, "American Business and American Liberals: Slogans or Responsibility?" by Norton Long (from *The Political Quarterly*), "The Challenge of a Stable Russia" by Alex Inkeles (from *The Antioch Review*), "Changing Patterns in the Philosophy of Management" by Carl F. Slover (from *Public Administration Review*), "Computers: A Delayed Revolution" (*Business Week*), "Debate on Pay tv" by Eugene F. McDonald, Jr. and Richard J. Salant (from *Business Horizons*), "Laxity and Heresy" by Elie Sa-

lem (from *SAIS Review*), "Organized Labor's View of Corporate Financial Information" by Wilbur F. Pillsbury (from *The Journal of Accountancy*), and "People and Profits: Profits Make Jobs" by Donald P. Jones (from *Vital Speeches of the Day*).

Issues and Ideas is published primarily as a service to member companies of the Industrial Relations Center of the University of Chicago. Subscriptions are available *only* to other university research groups, nonprofit organizations, and individuals or groups in other countries. Abstracts carried in a recent issue included "The Businessman's

PEOPLE WILL BE TALKING ABOUT

WINTER

William R. Anderson with Clay Blair, Jr., *NAUTILUS 90 NORTH* (World)

Saul Bellow, *HENDERSON THE RAIN KING* (Viking)

Joyce Cary, *THE CAPTIVE AND THE FREE* (Harper)

Winston S. Churchill, *MEMOIRS OF THE SECOND WORLD WAR* (1-volume abridgment of 6-volume *THE SECOND WORLD WAR*; Houghton)

Thomas Griffith, *THE WAIST-HIGH CULTURE* (Autobiography of a Time editor; Harper)

Fred M. Hechinger, *THE BIG RED SCHOOLHOUSE* (Education in Russia; Doubleday)

Arthur Larson, *WHAT WE ARE FOR* (By former chief of U.S.I.A.; Harper)

Irving R. Levine, *MAIN STREET U.S.S.R.* (Doubleday)

Walter Lippmann, *THE COMMUNIST WORLD AND OURS* (Little, Brown)

Boris Morros, *MY TEN YEARS AS A COUNTERSPY* (Viking)

Henri Queffelec, *THE KINGDOM UNDER THE SEA* (Pantheon)

SPRING

Pearl S. Buck, *COMMAND THE MORNING* (John Day)

Eugene M. Emme, *THE IMPACT OF AIR POWER* (Van Nostrand)

Kenneth F. Gantz (ed.), *MAN IN SPACE: THE UNITED STATES AIR FORCE REPORT* (Duell, Sloan)

Pierre Gascar, *THE SEED* (Little, Brown)

Frank Gibney, *THE FROZEN REVOLUTION* (Analysis of Polish revolution; Farrar, Straus)

Jennie Grossinger, *FROM JENNY WITH LOVE* (Autobiography of woman who built Grossinger's in the Catskills; Prentice)

Ben Hecht, *THE SENSUALISTS* (Messer)

Samuel Dash and others, *THE EAVES-DROPPERS* (On wire-tapping; Rutgers)

Arthur Koestler, *THE SLEEPWALKERS* (Macmillan)

Samuel Eliot Morison, *JOHN PAUL JONES* (Little, Brown)

Edgar Ansel Mowrer, *A GOOD TIME TO BE ALIVE: THE IMPACT OF THE WORLD ON AMERICA* (Duell, Sloan)

Vance Packard, *THE STATUS SEEKERS* (McKay)

Boris Pasternak, *I REMEMBER: SKETCH FOR AN AUTOBIOGRAPHY* (Written after Doctor Zhivago, this is latest work of Pasternak; Pantheon)

SPECIFICALLY FOR THE BUSINESS EXECUTIVE

EARLY WINTER

- Thomas J. Anderson, Jr.*, OUR COMPETITIVE SYSTEM AND PUBLIC POLICY (South-Western)
- James R. Bright*, AUTOMATION AND MANAGEMENT (Harvard)
- Cyril Burt*, PSYCHOLOGICAL STUDY OF TYPOGRAPHY (Cambridge)
- C. F. Carter and B. R. Williams*, INVESTMENT IN INNOVATION (Oxford)
- Charles Frederick Carter and others*, UNCERTAINTY AND BUSINESS DECISIONS (Gregory Lounz)
- Conference on Research in Income and Wealth*, AN APPRAISAL OF THE 1950 CENSUS INCOME DATA (Princeton)
- P. Lesley Cook and Ruth Louisa Cohen*, EFFECTS OF MERGERS (Macmillan)
- G. Hamilton Crook and Martin Heinstein*, THE OLDER WORKER IN INDUSTRY (Univ. of Calif., Inst. of Industrial Relations)
- Research Study 33*, DEFINING THE MANAGER'S JOB (The AMA Manual of Position Descriptions; AMA)
- C. Russell Doana and Edward J. Hills*, INVESTMENT TRUSTS AND FUNDS (Amer. Inst. for Economic Research)
- F. E. Emery and others*, INFORMATION, DECISION AND ACTION (Cambridge)
- Joseph M. Gillman*, THE FALLING RATE OF PROFIT (Cameron)
- Harvey Greenfield and Frank K. Griesinger*, SALE-LEASEBACKS AND LEASING IN REAL ESTATE AND EQUIPMENT TRANSACTIONS (McGraw)
- Paul R. Lawrence*, THE CHANGING OF ORGANIZATIONAL BEHAVIOR PATTERNS: A CASE STUDY OF DECENTRALIZATION (Harvard)
- Henry J. Levin (ed.)*, BUSINESS ORGANIZATION AND PUBLIC POLICY (Rinehart)
- Gardner Lindzey (ed.)*, ASSESSMENT OF HUMAN MOTIVES (Rinehart)
- Raymond F. Mikesell and Jack N. Behrman*, FINANCING FREE WORLD TRADE WITH THE SINO-SOVIET BLOC (Princeton)

1958 Conference on Automation Systems for Business and Industry, PROCEEDINGS OF THE SECOND EIA (Interscience)

- Sir Dennis Holme Robertson*, LECTURES ON ECONOMIC PRINCIPLES (On theory of distribution; John de Graff)
- Leonard R. Sayles*, BEHAVIOR OF INDUSTRIAL WORK GROUPS (Wiley)
- James S. Schindler*, QUASI-REORGANIZATION (A proposed adjustment of accounting procedures; Univ. of Mich.)
- William C. Schutz*, FIRO (Rinehart)
- Geo. Albert Smith, Jr.*, MANAGING GEOGRAPHICALLY DECENTRALIZED COMPANIES (Harvard)
- Paul Smith (ed.)*, CREATIVITY (An examination of the creative process; Hastings)
- United Nations*, THE FUTURE GROWTH OF WORLD POPULATION (Columbia)
- United Nations*, WORLD ECONOMIC SURVEY 1957 (Columbia)
- Paul Wasserman and Fred S. Silander*, DECISION-MAKING (Cornell)
- Sir Robert Watson-Watt*, THE PULSE OF RADAR (Dial)
- F. M. Wistert*, FRINGE BENEFITS (Reinhold)
- A. J. Youngson*, POSSIBILITIES OF ECONOMIC PROGRESS (Cambridge)
- A. Zaleznik, C. R. Christensen, and F. J. Roethlisberger*, THE MOTIVATION, PRODUCTIVITY, AND SATISFACTION OF WORKERS: A PREDICTION STUDY (Harvard)

LATE WINTER

- Douglas H. W. Allan*, STATISTICAL QUALITY CONTROL: AN INTRODUCTION FOR MANAGEMENT (Reinhold)
- Edward H. Bowman and Robert B. Fetter*, ANALYSES OF INDUSTRIAL OPERATIONS (Irwin)
- Cornell Univ. Graduate School of Business and Public Admin.*, MANAGING THE SEARCH (Cornell)
- Albert W. Frey*, THE ADVERTISING INDUSTRY (Ass'n of Nat'l Advertisers)
- Wilfred Owen*, CITIES IN THE MOTOR AGE (Viking)
- Leonard R. Sayles*, BEHAVIOR OF INDUSTRIAL WORK GROUPS (Wiley)

Moral Failure" by Louis Finkelstein (from *Fortune*), "Cynicism and Managerial Morality" by Benjamin Selekman (from *Harvard Business Review*), "The Dangers of Social Responsibility" by Theodore Levitt (from *Harvard Business Review*), "The Duty to Bargain in Good Faith" by Archibald Cox (from *Harvard Law Review*), "What the Factory Worker Knows About His Factory" by Fagg, Kaysen, and McKean (from *The Journal of Business*), *The Affluent Society* by J. K. Galbraith, "New Directions in Education for Business" by Thomas H. Carroll (from *Business Horizons*), *Human Relations and Modern Management* edited by E. M. Hugh-Jones, "Proceedings of the Spring, 1958 Meeting of the Industrial Relations Research Association" (*Labor Law Journal*), *Hawthorne Revisited* by Henry A. Landsberger, *The Changing Character of American Industry* (AFL-CIO Conference), *As Unions Mature* by Richard A. Lester, *Participation in Union Locals* by A. S. Tannenbaum and R. L. Kahn, *Unions and Civil Liberties: Claims vs. Performance* by Benjamin Aaron, *Management's Stake in Research* by Maurice Holland and contributors, "Industrial and Personnel Managements in Conflict" by John V. Cuff (from *The Business Quarterly*), "Labor's Political Spending and Free Speech" by Eugene H. Ruark, Jr. (from *Northwestern Law Review*), and *Brainpower Quest*, edited by Andrew A. Freeman.

We might mention here two other pertinent magazines also relatively new (in their third year): *Contemporary Psychology: A Journal of Reviews* published monthly by the American Psychological Association, and *Behavioral Science* published

quarterly by the Mental Health Research Institute of the University of Michigan. Recently reviewed, for example, in *Contemporary Psychology* were *The Order of Presentation in Persuasion* by C. I. Hovland and others, *Motivation and Market Behavior* edited by Robert Ferber and H. G. Wales, *Motivation in Advertising: Motives That Make People Buy* by Pierre Martineau, and *Motivation Research and Marketing Management* by J. W. Newman. *Behavioral Science* features a section entitled "Abstracts of Current Literature with Interdisciplinary Implications."

Isis: An International Review Devoted to the History of Science and Its Cultural Influences contains an extensive critical bibliography of works in its area of interest, which is indeed a broad one.

IN SPITE of all the efforts in digesting and selective reprinting, many valuable articles are

still largely buried from the eyes of all but a few inveterate browsers. By "valuable" here we mean to the executive. And yet we doubt if most of them cross his desk or find their way into his briefcase unless he has an extraordinary company librarian.

One such article, for example, appeared in the October, 1958, issue of *Ethics* (an international journal of social, political, and legal philosophy published by the University of Chicago). Entitled "Socioeconomic Decisions" by Paul Diesing, it starts from the premise that "All decisions dealing with the activities of a single person or a single group—'selfish' decisions—are either economic, or social, or a combination of the two." (p. 1) Economic decisions attempt to maximize the achievement of given ends through the careful use of available means, in a situation where not all ends can be fully achieved. Social decisions attempt to change personalities and social

relations in the direction of greater fundamental harmony and stability.

"For example, when dealing with living standards in an underdeveloped country, a person with a planning, administrative, or economic background would conceive of higher living standards as an obvious goal and would set to work measuring nutritive values, productivity rates, and resource distribution procedures to see how living standards could be raised. An anthropologist, on the other hand, would see consumption patterns as symbols of social statuses and roles, and regard changes in consumption as symptoms of status changes, or even of drastic cultural reorganization. He would insist on uncovering the system of statuses, beliefs, and values to which consumption is related before deciding on possible changes in consumption; and any changes he suggested would probably not be designed to improve living standards, but would more likely be designed to reduce the conflicts and strains involved in particular consumption habits." (p. 3)

The point is—when to choose which method? Sometimes the choice is obvious—clearly one is more suitable than the other. But

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complex practical problems usually contain a wide variety of factors demanding a combined method. Diesing outlines three types of combined methods and illustrates each with the kind of problem to which it is best suited.

In general, most of the articles in *Ethics* are particularly apropos of growing preoccupation with moral responsibility in organizations. Along the same line, last spring's issue of *Law and Contemporary Problems* was devoted to "The New Look in Corporation Law," by which title the editors meant the trend away from "enabling act" theory to "social responsibility" theory in corporation statute. The lead article, "The Philosophy of Midcentury Corporation Statute" by Wilbur G. Katz, was unusually lucid and candid. In the course of the article Katz points out that the "social responsibility" proponents have engendered considerable enthusiasm but have gone little beyond this, and that they must face up to the precise legal implementation of their theory. Because they persist in avoiding the rigors involved, "enabling act" theory still dominates corporation law in spite of the constant attack upon it by social philosophers, economists, and executives themselves. He concludes that "the new philosophy has thus far succeeded in producing only an unresolved discontent with existing corporation law." (p. 192)

Also in the contiguous area of values, *Behavioral Science* (October, 1958) contained a discussion of "Behavioral Redundancy" by Benjamin N. Colby. From noting the results of several disparate studies, the author suggests that behavior demonstrates a fairly consistent "fifty-percent redundancy"—that is, by repeating previous behavior roughly half

FOR THE INFORMED READER

EARLY WINTER

Elton Atwater and others, *WORLD AFFAIRS* (Appleton)

Erik Bergaust and Seabrook Hull, *ROCKET TO THE MOON* (Van Nostrand)

Daniel J. Boorstin, *THE AMERICANS: THE COLONIAL EXPERIENCE* (Random)

Germaine Bree, *CAMUS* (Rutgers)

Henry Walter Ehrmann (ed.), *INTEREST GROUPS ON FOUR CONTINENTS* (Pittsburgh)

Alexander Eliot, *SIGHT AND INSIGHT* (Ways of looking at art; McDowell)

Robert James Forbes, *MAN THE MAKER* (Abelard-Schumann)

Patrick Gardiner (ed.), *THEORIES OF HISTORY* (Free Press)

Frank Gibney, *THE OPERATORS* (Harper)

Albert O. Hirschman, *THE STRATEGY OF ECONOMIC DEVELOPMENT* (Yale)

Clarence Wilfred Jenks, *THE COMMON LAW OF MANKIND* (Praeger)

Morton Keller, *IN DEFENSE OF YESTERDAY* (Coward-McCann)

George F. Kneller, *EXISTENTIALISM AND EDUCATION* (Philosophical)

Brigadier-General William McKean, *RIBBON CREEK* (Dial)

Eric Lionel Mascall, *THE IMPORTANCE OF BEING HUMAN* (Columbia)

the time, it moves toward an equilibrium between the unexpected and the predicted, between organization and disorganization. If valid, this equilibrium theory of redundancy could be useful, Colby further suggests, for studying cultural and personal value systems. He refers especially to the work of Harvard's renowned anthropologist, Clyde Kluckhohn, on the isolation of universal values through comparison of eccentric value systems.

The autumn issue of *ETC.*: *A Review of General Semantics* contained an uneven but informative article called "General

Abraham H. Maslow (ed.), *NEW KNOWLEDGE IN HUMAN VALUES* (Harper)

Margaret Mead and others, *MAN IN SPACE: A TOOL AND PROGRAM FOR THE STUDY OF SOCIAL CHANGE* (N. Y. Acad. of Sciences)

John J. Murray (ed.), *THE HERITAGE OF THE MIDDLE WEST* (Oklahoma)

General George Pokrovsky, *SCIENCE AND TECHNOLOGY IN CONTEMPORARY WARFARE* (Praeger)

Magnus Pyke, *NOTHING LIKE SCIENCE* (St. Martin's)

Theodore Roscoe, *PIGBOATS* (On submarines of World War II; Bantam)

Arthur M. Schlesinger, Jr., *THE COMING OF THE NEW DEAL* (Second of 4-volume "Age of Roosevelt"; Houghton)

Herbert Wallace Schneider, *THE PURITAN MIND* (Univ. of Mich.)

Erwin Schrödinger, *MIND AND MATTER* (Cambridge)

George Schwartz and Philip W. Bishop (eds.), *MOMENTS OF DISCOVERY* (The development of modern science; Basic Bks)

David Spitz, *DEMOCRACY AND THE CHALLENGE OF POWER* (Columbia)

Paul Sultan, *RIGHT-TO-WORK* (Univ. of Calif.)

Charles Converse West, *COMMUNISM AND THE THEOLOGIANS: STUDY OF AN ENCOUNTER* (Westminster)

Semantics: Its Place in Science" by Anatol Rapoport. Concerned with man's symbolic behavior, semantics has sired a new discipline called psycho-linguistics—the study of language as behavior—and it is the background of this development (stemming largely from Korzybski) that Rapoport briefly sketches out here.

Robert B. McNee in an article entitled "Functional Geography of the Firm, With an Illustrative Case Study from the Petroleum Industry" in *Economic Geography* (October, 1958, p. 337) made this statement:

ECONOMIC DYNAMICS

Second Edition

By William J. Baumol, Princeton University

The first comprehensive treatment of the theoretical analysis of economic dynamics, this book provides an insight into economic developments up to the present and a working knowledge of research techniques.

A greatly expanded mathematical section includes new material on: numerical computation in higher order systems, non linear equations, and simultaneous difference and differential equation systems.

Coming April 1959

FOREIGN TRADE AND FINANCE:

Essays in International Economic Equilibrium and Adjustment

Edited by William R. Allen, University of California, Los Angeles; and Clark Lee Allen, Southern Illinois University

Twenty-three essays by well-known economists are organized into sections on: international trade theory and commercial policy, interpretation of the balance of payments, and alternative mechanisms of balance of payments adjustment. With a minimum of mathematics, clearly written editorial commentaries summarize, extend and evaluate key points in the essays.

Coming May 1959

TO BE
PUBLISHED

MANAGERIAL ACCOUNTING

An Introduction

By Harold Bierman, Jr., Cornell University

This meaningful introduction to the principles and managerial uses of accounting is divided into two sections. *Financial Accounting* presents the theories of accounting, information on the preparation of statements, and various accounting techniques.

Managerial Accounting emphasizes the control of costs and the acquisition of relevant information for decision making.

Coming March 1959

BUSINESS BEHAVIOR, VALUE AND GROWTH

By William J. Baumol

A revision of the theory of pricing, advertising and related decisions of big business firms, this new work contributes to the theory of oligopoly a model which agrees more closely than the usual theories with the "practical economists' " account of business behavior. It also offers some novel hypotheses concerning the theory of economic development.

Coming May 1959

PUBLISHED

MANAGEMENT PRINCIPLES AND PRACTICES

By Dalton E. McFarland, Michigan State University

Emphasizing the impact of recent human relations and social science research on business management, this useful manual presents a survey of modern ideas in management as well as a critical evaluation of old and tested concepts. The author analyzes the managerial functions necessary for effective organization in any type of business activity and describes

various problem situations.

1958, 612 pages, \$9.25

CLASSICS IN THE THEORY OF PUBLIC FINANCE

Edited by Richard A. Musgrave, University of Michigan, and Alar. T. Peacock, University of Edinburgh

This volume contains English translations of significant articles on problems of public finance by noted economic theorists. Among the contributors: Ugo Mazzola, Knut Wicksell, G. Montemartini, Erik Lindahl, and Hans Ritschl.

1958, 244 pages, \$6.00

The Macmillan Company

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"Geographers, through their understanding of the process of spatial interaction and the application of the regional method, can illuminate the corporation, an outstanding phenomenon of our time."

Using Socony Mobil as an example, McNee made a pilot study of the importance of corporations as space-organizers—the kind of study that should throw light on industrial growth processes, the role of corporations in the economic development of areas, and the effects of corporate decision-making in areas of regional interdependence.

The facility and sophistication of the geographer in the art of visual representation of all kinds of data, usually through maps, is evident in this article as well as in two others in the same issue: "A Note on Central Place Theory and the Range of a Good" by Brian J. L. Berry and William L. Garrison; and "World Income and Types of Economies: The Pattern of World Economic Development" by D. W. Fryer. The place-theory article would, of course, be of interest primarily to market researchers and real estate specialists. The Fryer article holds a more general appeal. Among its conclusions is this:

"A high rate of economic development is not a prerogative of any particular type of political organization, nor indeed is economic stagnation. Recent Asian experience shows that democratic forms of government can be successful in underdeveloped as well as highly-developed countries, and it would not be difficult to show that political democracy is far from secure in one or two of the latter. Any form of political organization can have economic progress if it really wants it, and is prepared to make the social readjustments that inevitably arise." (p. 303)

If true, the implications of this conclusion could shake several hallowed assumptions.

The December, 1958 issue of the *Bulletin of the Atomic Scientists*, which, incidentally, is not a technical publication but "a magazine of science and public affairs," includes an article by George T. Frampton on "Radiation—Whose Responsibility?" He discusses the question: Can and will state and local governments regulate conditions of possible exposure to radiation and administer compensation for radiation damage? He notes briefly the steps now being taken at all levels of government to deal with the problems involved.

A fairly new international review of philosophy and humanistic studies, *Diogenes*, carried in its last spring issue an article by François Perroux, the founder and director of the Institut de Science Economique Appliquée, on "Information: A Factor of Economic Progress" (translated by James H. Labadie). After giving his famous definition of a progressive economy—"An economy is progressive when effective innovation, let us say that capable of increasing real productivity and a real product, spreads and propagates its fruits, with the least delay and at the least social cost in a network of economic relationships whose sense is universalized, that is, *becomes intelligible and acceptable to all, especially to the least favored*." (p. 31, italics ours), he examines the place of information in such an economy.

Last spring's issue of the *Public Administration Review* ran a discussion by Marshall E. Dimock of executive development programs under the title "Executive Development After Ten Years." After reviewing the three kinds of programs currently offered (those given by institutions for selected groups of their own employees in order to orient and

FOR THE INFORMED READER

LATE WINTER

- Tamas Aczel and Tibor Meray*, THE REVOLT OF THE MIND (Praeger)
Margaret Mead, ANTHROPOLOGIST AT WORK: WRITINGS OF RUTH BENEDICT (Houghton)
Stimson Bullitt, TO BE A POLITICIAN (Doubleday)
James Bryant Conant, THE AMERICAN HIGH SCHOOL TODAY ("The Conant Report"; McGraw)
 CONTEMPORARY AMERICAN PAINTING AND SCULPTURE, 1959 (Illinois)
Justice William O. Douglas (ed.), THE MIND AND FAITH OF A. POWELL DAVIES (Doubleday)
Lawrence Durrell, ESPRIT DE CORPS (Sketches from diplomatic life; Dutton)
Erich Fromm, SIGMUND FREUD'S MISSION (Harper)
Heinrich Gerlach, THE FORSAKEN ARMY (Harper)
William Green and John Fricker, THE AIR FORCES OF THE WORLD (Hanover)
Edward T. Hall, THE SILENT LANGUAGE (Doubleday)
Richard G. Hubler, SHATTERING OF THE IMAGE (Duell, Sloan)
Juergen Joedicke, A HISTORY OF MODERN ARCHITECTURE (Praeger)
Hans Meyerhoff (ed.), THE PHILOSOPHY OF HISTORY IN OUR TIME (Anchor)
F. O. Miksche, THE NUCLEAR IMPASSE (Praeger)
Peter Neumann, THE BLACK MARCH (Sloane)
Allan Nevins, JOHN D. ROCKEFELLER (New 1-volume abridgment of classic biography; Scribner's)
H. W. Newton, THE FACE OF THE SUN (Pelican)
Wilfred Noyce, THE SPRINGS OF ADVENTURE (World)
Len O'Connor, THEY TALKED TO A STRANGER (St. Martin's)
Robert Payne, THE GOLD OF TROY (Funk & Wagnalls)
Serge Hughes (trans.), PICASSO AT VALLAURIS (Reynal)
Henry Hope Reed, Jr., THE GOLDEN CITY (Doubleday)

Vice-Admiral Hyman G. Rickover, EDUCATION AND FREEDOM (Dutton)
 Philip Rieff, FREUD: THE MIND OF THE MORALIST (Viking)
 Raymond O. Rockwood (ed.), CARL BECKER'S HEAVENLY CITY REVISITED (Cornell)
 William L. Schurz, AMERICAN FOREIGN AFFAIRS (Dutton)
 Erich Fromm, Norman Mailer, C. Wright Mills and others, VOICES OF DISSENT (Evergreen)
 C. V. Wedgwood, THE KING'S WAR (Sequel to "The King's Peace"; Macmillan)
 Dan Wakefield, ISLAND IN THE CITY: THE WORLD OF SPANISH HARLEM (Houghton)
 Herbert Wendt, THE DISCOVERY OF ANIMALS (Houghton)
 M. R. Werner and John Starr, TEAPOT DOME (Viking)

SPRING

Stanley D. Beck, THE SIMPLICITY OF SCIENCE (Doubleday)
 David Blumenstock, THE OCEAN OF AIR (Rutgers)
 Courtlandt Canby, DYNAMIC AMERICA (History of General Dynamics Corp., ed. by John Niven; Doubleday)
 Erwin O. Christensen, BRIEF HISTORY OF WESTERN ART (Mentor)
 Padraic Colum, ARTHUR GRIFFITH AND THE ORIGINS OF THE IRISH FREE STATE (Crown)
 Wilbur Cross, CHALLENGERS OF THE DEEP (Sloane)
 Max Eastman, GREAT COMPANIONS (Farrar, Straus)
 Robert Engler, POLITICS OF OIL (Abelard-Schuman)
 Walter Fairservis, ORIGINS OF ORIENTAL CIVILIZATION (Mentor)
 Eugene Fodor (ed.), JET AGE GUIDE TO EUROPE (McKay)
 L. W. Hull, HISTORY AND PHILOSOPHY OF SCIENCE (Longmans)
 Charles Hurd, THE COMPACT HISTORY OF THE AMERICAN RED CROSS (Hawthorn)
 Richard Joseph, RICHARD JOSEPH'S 1959 JET-AGE GUIDE TO EUROPE (Doubleday)
 Matthew Josephson, THOMAS ALVA EDISON (McGraw)

Abram Kardiner and Edward Preble, THEY STUDIED MAN (Meridian)
 Senator Robert S. Kerr, LAND, WOOD AND WATER (Fleet)
 Al Lansing, ENDURANCE (McGraw)
 Levy-Strauss, TRISTES TROPIQUES (Criterion)
 Theo. Loeb sack, OUR ATMOSPHERE (Pantheon)
 Thomas Mann, LAST ESSAYS (Knopf)
 Isaac Marcossan, BEFORE I FORGET (Dodd, Mead)
 W. Somerset Maugham, POINTS OF VIEW: FIVE ESSAYS (Doubleday)
 Felix Morley, REPUBLIC AT THE CROSS ROADS (Regnery)
 Alvin Moscow, COLLISION COURSE (Putnam)
 Stephen Neill, A GENUINELY HUMAN EXISTENCE (Doubleday)
 Eric Newby, SHORT WALK: A PREPOSTEROUS ADVENTURE (Introd. by Evelyn Waugh; Doubleday)
 Robert G. Richardson, THE SURGEON'S TALE (Scribner's)
 Theodore Ropp, WAR IN THE MODERN WORLD (Duke)
 Bertrand Russell, MY PHILOSOPHICAL DEVELOPMENT (S. & S.)
 Robert Lee Scott, Jr., FLYING TIGER-CHENNAULT OF CHINA (Doubleday)
 Frederic Sondern, BROTHERHOOD OF EVIL (About the Mafia; Farrar, Straus)
 James Thurber, THE YEARS WITH ROSS (Little, Brown)
 THE TIMES ATLAS OF THE WORLD, Vol. I, THE WORLD: AUSTRALIA (Houghton)
 Alan Villiers, GIVE ME A SHIP TO SAIL (Scribner's)
 Walter Prescott Webb, AN HONEST PREFACE (Houghton)

CLASSIC REPRINTS

Henry Adams, MONT-SAINT-MICHEL AND CHARTRES (Anchor)
 Carl Lotus Becker, MODERN HISTORY (Silver Burdett)
 Stuart Chase, THE TYRANNY OF WORDS (Harvest)
 Sigmund Freud, ON CREATIVITY AND THE UNCONSCIOUS (Harper)
 Ellsworth Huntington, MAINSPRINGS OF CIVILIZATION (Mentor)

stimulate the promising but inexperienced toward administration; those operated by colleges, government, and sometimes business for middle and top management with ten to fifteen years' experience; and those few for training top management, still mainly experimental programs), Dimock ventures several criticisms on the basis of interviews with participants. These are: (1) the programs spend too much time on the processes and techniques of decision-making and too little on *what* is being decided and *why*; (2) the programs are too rigidly built around conventional classroom methods and are generally too short in duration; and (3) there is too much emphasis on the group and too little on the individual, also too little on the "whole man" as against the man in his limited work role.

He foresees three main developments in the programs: fewer programs but a larger proportion for top management, with emphasis on public policy rather than on administration techniques; administration of the programs reserved to planning and evaluating, the programs themselves being conducted more by the participants in the spirit of self-learning (in other words, more tutorial direction and less lecture); resulting advances in the training of top executives that will directly and beneficially affect management training in the universities.

In the October issue of *The United Nations Review* were two articles with definite portents for the future: "The Growing Role of Production for Sale in Africa's Economy," which is an analysis of the economic structures of the Federation of Nyasaland and Rhodesia, Morocco, and the Sudan; and "Common Market for Central America," a trial

run for the contemplated Latin America regional market.

The Saturday Review has instituted an annual business issue, and the one for 1959 came out last January 17. It was done with the cooperation of the Committee for Economic Development and consisted of reports presented at their recent Washington conference. The title of the special issue was "The American Economy: 1959" and contributors included Donald K. David, T. V. Houser, Theodore O. Yntema, Robert Nathan, Beardsley Ruml, Marion B. Folsom, Jacob Viner, Theodore W. Schulz, Thomas D. Cabot, Howard C.

Petersen, Meyer Kestenbaum, W. Allen Wallis, and Emilio G. Collado.

Many executives might profitably subject *Dissent* to a close scrutiny, for, being "a quarterly of socialist opinion," it explicates generally the ethos of the kind of socialistic democracy most popular in the developing uncommitted countries. Particularly enlightening on the subject was Sidney Lens' "A Report on Asian Socialism" in last spring's issue. A strong implication is that the notion of placing an aid embargo on any country whose democratic structure varies from ours could be dangerous wishful thinking.

Most likely the sheep and the goats will have to arrive at some sort of *modus vivendi* or leave the pastures to wildcats.

Among the new magazines of interest is, first, the latest addition to the academically sponsored business journals, the *California Management Review*. It carries no advertising as do the *Harvard Business Review* and *Business Horizons*, but in general format it is closer to them than to Chicago's more academic *Journal of Business*. From the lead article in its first issue ("Elementary Conditions of Business Morals" by Chester I. Barnard) to the last, there is a nice balance among various management interests. The most attention-arresting is Edward Teller's "Industrial Revolution, 1650-2250."

Entering its third year of publication is Russell Kirk's new conservative review, *Modern Age*. In anticipation of the coming centennial of the Civil War (1961-65), which has already occasioned a veritable flood of Civil War literature, *Modern Age* designed its last fall's issue as "A Special Number on the South." The magazine plans publication of later numbers concerned with other American regions and their culture. The next region to be considered, probably some time soon, will be the Middle West.

A new periodical of promised import is *Daedalus*, a quarterly sponsored by the American Academy of Arts and Sciences "to provide communication between leading scholars in all fields in an attempt to remedy the present isolation of the specialist."

And from the reportage services to management, one of the most foresighted is *Business International*, a weekly report to management on business abroad (annual subscription, \$150). Special reports are also available.

BEST SELLERS, 1958 NONFICTION

Harry Golden, ONLY IN AMERICA (World)

J. Edgar Hoover, MASTERS OF DECEIT (Holt)

Thor Heyerdahl, AKU-AKU (Rand McNally)

John Gunther, INSIDE RUSSIA TODAY (Harper)

John Galbraith, THE AFFLUENT SOCIETY (Houghton)

Cyril Parkinson, PARKINSON'S LAW (Houghton)

THE MEMOIRS OF FIELD MARSHAL THE VISCOUNT MONTGOMERY OF ALAMEIN (World)

Gregory ("Pappy") Boyington, BAA BAA BLACK SHEEP (Putnam)

HIGHER-PRICED PAPERBACKS

William Barrett (ed.), ZEN BUDDHISM (Anchor)

Samuel Beckett, ENDGAME (Evergreen)

Albert Camus, THE STRANGER (Vintage)

Marchette Chute, SHAKESPEARE OF LONDON (Dutton)

W. E. LeGros Clark, HISTORY OF THE PRIMATES (Phoenix)

John Dewey, THE CHILD AND THE CURRICULUM AND THE SCHOOL AND SOCIETY (Phoenix)

William Faulkner, THE SOUND AND THE FURY (Modern Lib.)

Sigmund Freud, CIVILIZATION AND ITS DISCONTENTS (Anchor)

Marvin Halverson and Arthur Cohen (eds.), A HANDBOOK OF CHRISTIAN THEOLOGY (Meridian)

F. H. Heinemann, EXISTENTIALISM AND THE MODERN PREDICAMENT (Torchbook)

Richard Hofstadter, THE AMERICAN POLITICAL TRADITION (Vintage)

Rolfe Humphries (trans.), OVID'S THE ART OF LOVE (Midland)

James Joyce, A PORTRAIT OF THE ARTIST AS A YOUNG MAN (Compass)

Walter Kaufmann, EXISTENTIALISM FROM DOSTOEVSKY TO SARTRE (Meridian)

Jack Kerouac, THE SUBTERRANEANS (Evergreen)

C. Wright Mills, WHITE COLLAR (Galaxy)

Boris Pasternak, SAFE CONDUCT (New Directions)

David Riesman, THE LONELY CROWD (Anchor)

E. V. Rieu (trans.), HOMER'S ODYSSEY (Penguin)

Albert Schweitzer, AFRICAN NOTEBOOK (Midland)

William H. Whyte, THE ORGANIZATION MAN (Anchor)

John A. Wilson, THE CULTURE OF ANCIENT EGYPT (Phoenix)

Thomas Wolfe, YOU CAN'T GO HOME AGAIN (Universal)



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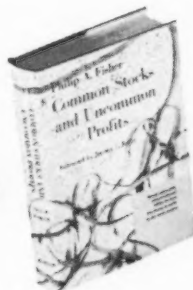
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by R. Stansbury Stockton

NEVER before has so much been written by so many about a subject that was formerly considered to be beyond the realm of the written word. During the past 20 years, the veritable flood of periodicals and books dealing with the many aspects of management marks a major change in the attitudes and thinking of both business executives and business educators. The books reviewed here are recent additions to the flood that confronts the potential reader in the general management field. While their timing is similar, their approach and content offer a striking contrast. For that reason, they deserve the attention of today's business reader.

Not too many years ago, one who was interested in reading about the management or administrative process would have been severely limited in the number of information sources available to him. More recently, we have come to realize that there are some fundamental concepts that underlie the leadership task wherever it may be found. Furthermore, the personal skills and attitudes required to manage successfully can be differentiated from technical skills.

Frederick W. Taylor's work is an outstanding example of an early attempt to build a body of knowledge or science dealing with certain problems of business management. Unfortunately, many readers of Taylor's work understood only the techniques he described and missed the all-important fundamental framework within which applications of specific techniques and procedures are made. It is clear to

us today that the scientific management group fell far short of their mark and did not develop a true science of management. On the other hand, they at least made a strong initial case *against* the prevailing attitude that any attempt to prescribe management behavior in terms of common business problems was doomed to failure. Thus, credit for establishing the first significant break-through in management theory clearly belongs to the scientific management group.

A second break-through has characterized the past 20 years in the literature of management. Two significant differences are (1) that no one individual stands out clearly as the leader of the movement, and (2) that the scope is much broader in the sense that the general management process rather than certain phases of shop management is the subject of interest. The repercussions of this movement are more far-reaching than those of Taylor and his associates. Educational and training programs in businesses, the armed forces, public administration, and universities have placed increasing emphasis on the art as well as the science of the management process as it has been recorded in the literature of the field. While one must still learn to be a manager by managing, the value of the written word on this subject is no longer a burning issue among most business executives.

MANAGEMENT AND ORGANIZATION by Louis A. Allen

Mr. Allen's book reflects the latest thinking toward that portion of the management task in-

volving the development of organization relationships. In the jargon of the management trade, it is a book about the managerial function of organizing and organizational planning. The chapter headings, for example, include "Designing the Company Organization Structure," "The Process of Delegation," "Centralization and Decentralization," and "Staff and Line Relationships." Its scope, therefore, is not so broad as its running mate in this series, *Principles of Management* by Harold Koontz and Cyril O'Donnell.

The basis for the book is necessarily similar to that of all general management publications. Writers in this field must have considerable personal experience within the real world of business. At some point, the observer seeks to record his observations concerning business management. Basic types of management problems are first described, then the factors that seem to be important are discussed. Finally, some basic conclusions believed to be generally applicable to similar problems are drawn, frequently in the form of principles of management.

This approach is essentially an application of the same scientific method that Taylor used to advantage in his study of shop operations. It is a logical and useful method to employ in the study of management, provided the observer has wide experience and an objective viewpoint. Mr. Allen seems to meet both requirements admirably. He has served with Booz, Allen and Hamilton, and is now president of his own management consulting organization.

In addition to his personal experience, he has drawn heavily on the experience of many well-managed companies that have resolved organizational problems of all types, and has also made reference to other well-known writers in the field.

The book might easily have been subtitled *A Manager's Guide to the Recognition, Analysis, and Solution of Organization Problems*. The material on such general problems as delegation, use of staff, and line-staff relationships should supply the reader with a deeper appreciation of the many factors that influence the collective and individual effectiveness of the executive and supervisory work group. The several chapters devoted to divisionalization and decentralization contain many helpful comments on the nature and complexity of this problem of current importance. One of the most useful portions of the author's materials is his frequent reference to the danger signals of poor organization or of factors that indicate a possible change may be required. Once this need has been established, a program to cope with and eliminate these difficulties must be planned and implemented. The last two chapters indicate the general nature, requirements, and timing for such a program.

The author's views are generally in agreement with those that have become accepted as standard organization theory. At several points, however, he takes issue with this theory and suggests revisions in terminology as well as concepts. He makes a distinction, for example, between administration and management. The former is the more inclusive term inasmuch as it includes operating work in addition to the normal managerial tasks. A more

basic revision is the author's statement that "authority can only be delegated commensurate with authority" and "authority can never be delegated equal to responsibility." This is a direct refutation of a principle long recognized in the literature. Based upon the example cited, however, it seems to me that Mr. Allen has failed to distinguish between administrative and operative managerial phases of the managerial process. Responsibility and *equal* authority for the latter are frequently delegated with organizational growth to subordinates. The former is a retained function of the administrative executive involved. My understanding of Mr. Allen's phrase would be that the authority that one delegates to a subordinate should not be mistaken by either party as *final* and *complete* authority and re-

sponsibility with reference to the functions assigned.

There are several other concepts, such as line and staff, and types of staff authority to which the author's approach or his stand on issues is somewhat unusual. Nevertheless, none of these, in my opinion, is in basic conflict with the fundamental framework upon which organizational theory has rested for many years. For that reason, it can be classified as a clear and practical presentation of the organizing function as we presently understand it.

ORGANIZATIONS

by James G. March and Herbert A. Simon

Members of the behavioral sciences have always been interested in many of the subjects that are the concern of business managers. In recent years, however,

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their interest has expanded to include much of the general management process. Because their backgrounds are dissimilar to those who have typically written in the management field, the invasion of the behaviorists is certain to be a topic of interest to all for many years to come. The March and Simon book is one of the first in recent years that clearly comes from this new school.

While the title of this book is similar to that of Mr. Allen's, the content is dramatically different. The chapter headings, for example, include "Organizational Behavior," "Motivational Constraints: Intraorganizational Decisions," "Conflict in Organizations," and "Planning and Innovation in Organization." The differences extend into the basic approach to the subject as well as much of the terminology, so that it is not easy reading. On the other hand, the reader who enjoys a challenge will find it a rewarding experience.

The basic difficulties with classical organization theory according to the authors are that: (1) "... not a great deal has been said about organizations, but it has been said over and over in a variety of languages," and (2) "the literature contains many assertions, but little evidence to determine—by the usual scientific standards of public testability and reproducibility—whether these assertions really hold up in the world of fact." The second seems to me to be the more important challenge. What they are saying is that the body of knowledge that many of us refer to as the science of management does not meet, by the standards to which the authors subscribe, the real test of a true science; that is, public testability and reproducibility. Technically, their statement is justified. On the other

hand, few authors would claim that the management principles that have been developed to date have specific predictive value. The term philosophy rather than science would perhaps better describe the present state of our knowledge in relationship to the management process. In this sense, it appears to me that the authors have overestimated the explicitness of existing management theorems and taken us to task for a crime that few experienced business executives would commit, considering the present state of their own philosophy or that of the literature.

The authors have assumed the role of constructive critics in presenting their material. The substantive content of the book is largely old wine placed in very new and unfamiliar bottles. Their intended contribution to the field lies in reformulating existing assertions in a form that will facilitate formal testing and in suggesting what kinds of tests might be applicable to the task.

The content of the book may be generally divided into parts. Chapter 2 is an evaluation of classical organization theory. In the minds of the authors the latter is sorely lacking, especially in the sense that it "views the human organism as a simple machine." In Chapters 3, 4, and 5, the problems of motivation and internal conflict are described as they influence both individual and group behavior. The final chapters, 6 and 7, analyze the limitations of the rational man concept, the consequences of this fact on both organization structure itself, and the ability of the organization to innovate successfully. The latter section, in my opinion, represents the most interesting and potentially useful material in the book. The problem of innovation promises to be one of the major stum-

bling blocks on the business road which lies ahead.

It is too early to evaluate the authors' real contribution to our efforts to gain additional insight into the administrative process. My personal prognostication would be that this book represents the beginning of a potential third break-through in our knowledge of the management process. While the initial efforts of the behaviorists will probably raise more new questions than provide answers to existing questions, their fresh methods and viewpoints promise interesting if not startling years ahead for the science of management.

This book is recommended for the reader who has reached the point in his personal development program at which he is ready to strike out beyond the existing framework of management theory. It will try his patience at times, but this is a small price to pay for the challenge to personal creative thinking that it presents.

SPECIFICALLY FOR THE BUSINESS EXECUTIVE SPRING

Edmund C. Berkeley, SYMBOLIC LOGIC AND INTELLIGENT MACHINES (Reinhold)

Joseph W. Conard, INTRODUCTION TO THE THEORY OF INTEREST (Univ. of Calif.)

Richard N. Gardner, U.S. ECONOMIC POLICY: TRADE AND AID (Headline Series No. 134; Foreign Policy Ass'n)

Benjamin Higgins, ECONOMIC DEVELOPMENT: PRINCIPLES, PROBLEMS, AND POLICIES (Norton)

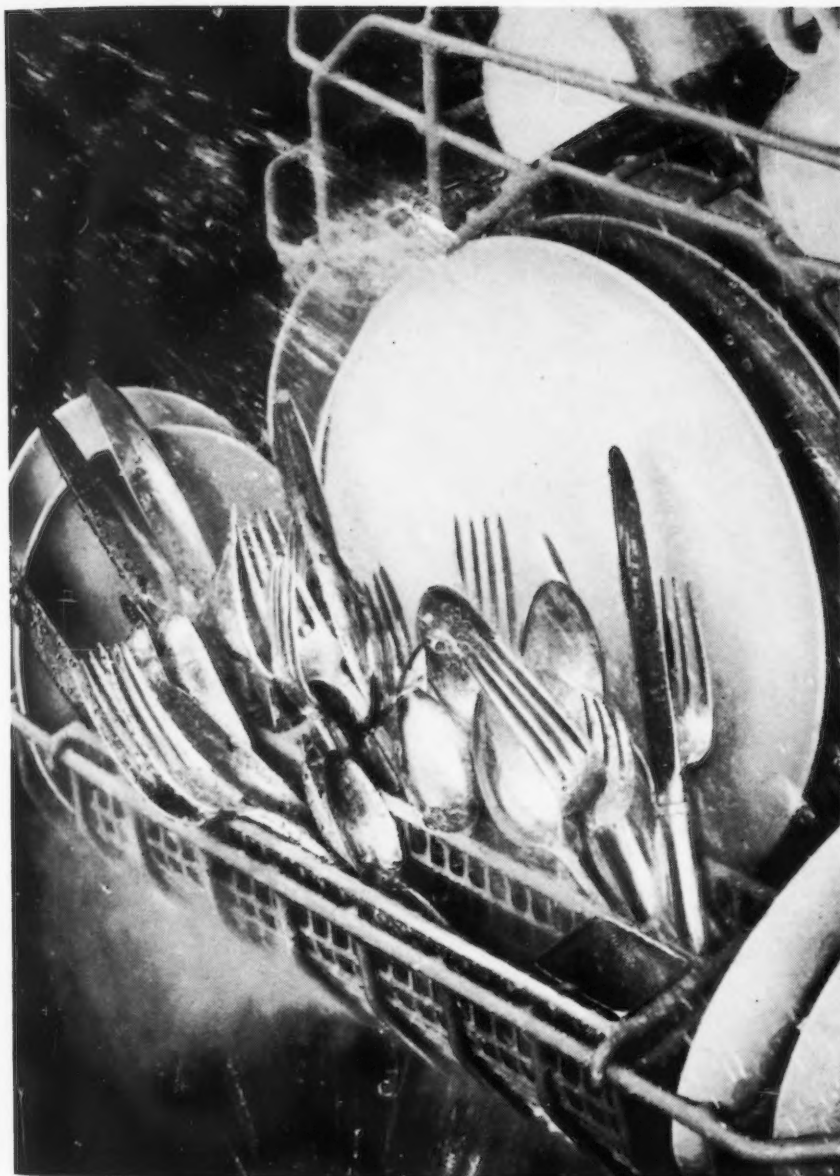
John B. Rae, AMERICAN AUTOMOBILE MANUFACTURERS (Chilton)

George Ridgeway, MERCHANTS OF PEACE (Little, Brown)

Lester Velie, LABOR, U.S.A. (Harper)

Clarence A. Weber and John W. Karnes, Jr., INDUSTRIAL LEADERSHIP (Chilton)

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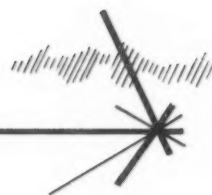
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